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## Transport Bill in the Autumn

THE decision of the Government, recorded in our last week's issue, not to take the Second Reading and Committee stages of the Transport Bill until next session, is not without its advantages. There is no doubt of the urgency of the measure, for having announced the main lines of its proposals, the Government necessarily has created a state of uncertainty little less acute than that which was unavoidable during the period the Bill was awaited. When the House resumes next session, the Transport Bill is to be its first business. By that time there should have been ample opportunity for study of its main provisions and for the crystallisation of ideas. There is no doubt that there is ample scope for elucidation and amendment of a number of clauses in the present Bill. It may well be that it was the intention of the Government to give time for the development of constructive thought before proceeding to pass the measure through Parliament. It is not unlikely that although it will stand by the principles in the Bill, it will be amenable to amendments in a number of matters of detail. In any event, from the long-term view it is the scheme for the reorganisation of the railways which the Bill requires to be submitted to the Minister not less than twelve months from the passing of the Bill, which will play the major part in determining the future of transport in this country. We have previously expressed the view, and we see no reason to change it, that one of the weakest parts in the Bill is the requirement that this scheme should be prepared by the

British Transport Commission. It would have been preferable to have sought this scheme from some body less indviduously placed, and whose fortunes were less directly involved.

## B.T.C. Report Debated

A PASSAGE in the Minister of Transport's speech during the debate last Tuesday on the British Transport Commission's report bore out the view expressed above that the Second Reading and Committee stages of the Transport Bill have been deferred until next session so as to give time for consideration of constructive proposals affecting the measure before it is passed through Parliament. Mr. Lennox-Boyd said that the broad structure of the Transport Bill represented the Government's intentions, but he would not be too proud to listen to advice from those who wanted to see it work and who recognised that the existing situation could not indefinitely be tolerated. He would be glad to discuss the problems of the Bill with all concerned. The debate is reported elsewhere this week. The Minister maintained in his speech that achievements in the separate entities of the B.T.C. recorded in the report were no answer as to whether the Transport Act of 1947 had fulfilled its purpose of integrating all transport activities. He said there had been absolute failure in the field of integration despite all the effort put into it. He had done his best to give temporary security to those who were working hard for the B.T.C.; Members of the Railway Executive would be absorbed into the new structure if they wished to be, while the London Transport Executive would be retained, though not exactly in its present form or name.

## Interstate Commerce Commission Retirement

THE retirement of Commissioner Clyde B. Aitchison from active duty with the Interstate Commerce Commission is a landmark in the history of that regulatory body, which can claim a proud record of service, enriched with great tradition since its inauguration in 1887. Though criticism has been voiced at the delay in giving decisions concerning changes in the level of charges allowed to American railways, motor carriers and others, the prestige with which the Commission is regarded by the traders, the carriers, and indeed by the general public, remains very high. Officially the Commission is an independent bureau and thus not subject to direction by any Government Department; though its decisions are naturally subject to appeal finally to the United States Supreme Court. Commissioner Aitchison was appointed to the Interstate Commerce Commission by President Wilson in 1917, and in consequence he has a record of service unequalled in the history of the Commission. A tribute to him by President Truman is recorded in our Personal pages this week, and will be echoed by all those who have had contact with the Commission, and they are legion; the Commission can ill afford to lose the guidance of one who has been fondly referred to as its "Father."

## Pressure on a Bottleneck

RECENT weeks have shown the difficulties that arise when circumstances throw extra traffic on to the line from Mafeking to Bulawayo, and illustrate the potential usefulness for traffic between South Africa and the Rhodesias of a link from Beit Bridge to West Nicholson, as was advocated by Mr. W. Marshall Clark, formerly General Manager, South African Railways & Harbours, in some comments quoted in our June 20 issue. The latest source of pressure on the existing railway route has been congestion at Beira, which has resulted in traffic for the Rhodesias being diverted to South African ports, particularly Port Elizabeth. Co-operation between the South African and the Rhodesia Railways resulted in goods being cleared from the harbour area and stored to await despatch as rapidly as the capacity of the Mafeking-Bulawayo line and the yard facilities at Mafeking permitted. A joint statement explaining the position and the measures taken to alleviate it was issued by the two railway administrations. Among the expedients has been the routing of some

motor vehicles with goods from South African ports for Northern Rhodesia via Beit Bridge, which is only some 105 miles from the terminus of the line to Bulawayo at West Nicholson. A railway link between Beit Bridge and West Nicholson is widely considered a more fruitful contribution to African transport development than the proposed new railway from Rhodesia to Lourenço Marques.

### Overseas Railway Traffic

**A**FTER a slight setback in the week ended July 4, Antofagasta (Chili) & Bolivia traffics made a considerable recovery in the following week and were £18,200 higher for the full fortnight. Results for the two weeks under review were a £5,640 fall to £127,210 and a £23,840 improvement to £153,980. On the aggregate, receipts for the first 28 weeks of the current year amounted to £4,318,340, as compared with £3,240,310 for the corresponding period of 1951. At the close of the financial year 1951-52, Paraguay Central traffics had made an aggregate advance by G7,896,397 to G19,078,570 and have continued to rise since July 1. Following the considerable gains made in 1951-52, South African traffics have so far improved by £1,154,461 to £23,250,461 for the 12 weeks to June 21.

### Tourist Industry

**T**HE Chairman of the British Travel & Holidays Association, Sir Alexander Maxwell, speaking at the annual meeting of the association held in London on July 16, said that this year had already been very successful. American tourist traffic had broken all previous records; the number of American visitors in May was 35 per cent. greater than last year. Heavy bookings are reported for 1952, particularly from America, which supported the estimate of 750,000 visitors this year, compared with 695,000 in 1951. Earnings should break all previous records and were expected to reach £120 million, a large proportion of which would be in American and Canadian dollars. Mr. Peter Thorncroft, President of the Board of Trade, said that last year had been the most successful for tourism in this country. Earnings had been £73 million of foreign currency. The Government was helping in giving grants and would continue to give the maximum help possible to proposals put forward by the association. He appreciated the difficulty of finding money, but considered that the burden of supporting the association could be more fairly shared than at present between public funds and those industries which benefited most substantially from the tourist trade.

### A Feat of Rerailing

**A**FTER the 8.20 a.m. express from Liverpool to Euston was derailed near Weedon on September 21 last year, it was necessary to recover the Pacific locomotive and tender from the field of soft earth into which they had fallen with as little damage as possible, for the purposes of the Inspecting Officer's inquiry into the cause of the accident (see our July 18 issue). The methods adopted are described in an article of which the first part is published on another page this week, together with an account of the detailed planning and co-operation between the London Midland Region departments concerned that were essential to the success of this unusual operation. A sleeper platform was constructed alongside the derailed locomotive, on to which it was rolled up by cranes. From the platform an inclined track was laid to the level of the running lines at the top of the bank, and up this the derailed Pacific was hauled by two locomotives with special tackle. The last stage was lifting back by cranes on to the running line, where a new bogie had been placed in readiness. All the recovery operations, as distinct from the preparatory work, were completed in one day, and went through with a smoothness on which all concerned with the planning and execution are to be congratulated.

### Abolishing Level Crossings in the U.S.A.

**I**N 1951, of a total of 37,100 persons killed and 1,962,000 injured in road accidents in the United States, 1,530 were killed and 7,840 injured by trains at level crossings.

These low percentages of 4.1 and 0.4 respectively are in spite of the fact that most American railway and road crossings are on the level instead of by overbridge or underbridge. The steady progress being made in "grade separation"—the substitution of bridges for level crossings—is more to prevent delay to road traffic than to promote safety, as proved by the grade crossing elimination schemes authorised by the New York State Public Commission in a recent year. The total number of crossings abolished was 396, but at 338 of them there had been fewer than five fatalities caused by trains in the previous ten years, and at 147 there had been no such accidents. In these circumstances, the proportion of the cost of grade separation that the railways are being compelled to bear is being gradually reduced by legislation; before 1939 it was generally 50 per cent., but some states, including New York, Michigan, Ohio, New Jersey, Louisiana, and Kentucky, have now cut the railway contribution to 15 per cent., and West Virginia and New Mexico to 10 per cent. only.

### Fishplate Failures

**I**N the United States, as in Great Britain, cracked and broken fishplates are a constant source of expense and concern to those responsible for the maintenance of track. The Central Research Laboratory of the Association of American Railroads has been devoting attention to the problem, and is now beginning a field study of these failures. Last year, as an experiment, 36 pairs of angle fishplates were selected, of which 12 pairs were carefully heated and quenched at well above the critical temperature of the steel; 12 pairs were quenched at below the critical temperature; and 12 pairs were left untreated. All 36 pairs were then subjected to fatigue tests. The 12 pairs that had been properly heat-treated showed a satisfactory resistance to fatigue, but the 12 pairs that had been quenched at below the critical temperature had a fatigue life only one-tenth of that of the properly treated plates, and considerably less than that of the plates that had not been reheated or quenched at all. The deductions drawn from these experiments are that more exact control at the mills of temperatures in the production of fishplates might well have some effect in reducing the incidence of fatigue failures in service.

### Collapse of a Footbridge

**T**HE collapse of the floor of the footbridge at Knowsley Street Station, Bury, on January 19 last, when 200 persons were thrown on the track, with two deaths and numerous injuries, naturally aroused widespread attention, mixed with misgiving regarding the condition of such structures generally. Brigadier C. A. Langley's report on the accident has now appeared. Faced with such an extraordinary and unexpected event, the railway staff acted with commendable promptitude and, fortunately, succeeded in stopping an approaching train in time. As originally designed, the bridge was strong enough to carry the heaviest load of passengers likely to be placed on it and its failure was attributable entirely to its maintenance having been insufficiently attended to. Certain essential parts had become so severely corroded as to be useless for their purpose. The structure had in fact been dangerous for a long time, and another footbridge was found to be in like condition. Nevertheless the report stresses that in the last 50 years only one Ministerial inquiry has had to be held concerning the failure of a railway structure, this being the fall of the roof of Charing Cross Station, London, attended with six fatalities, on December 5, 1905. This was caused by a flaw in a tie-bar, which ordinary inspection methods were not able to bring to light.

### Coal-Burning Gas Turbine Locomotive

**V**ARIOUS developments taking place in this country in connection with coal-burning gas turbines formed the subject of the Thomas Hawksley lecture to the Institution of Mechanical Engineers. This lecture by Dr. H. Roxbee Cox is summarised elsewhere in this issue. A coal-burning gas turbine locomotive, an order for which has been placed

in this country, is as yet in the early stages of development, and some time must elapse before full details of the combustion system, type of coal, ash disposal, and so on, will be available. Experiments with coal-burning gas turbine stationary sets have reached an advanced stage, but, because of the confined space of a locomotive, different problems arise in rail traction application. Experiments on a gas turbine locomotive using coal as a fuel have been carried out in the U.S.A. by the Allis-Chalmers Manufacturing Company in conjunction with the Locomotive Development Committee of Bituminous Coal Research Inc. Work on this locomotive, the power plant of which was described and illustrated in our issue of December 3, 1948, and which has now been running for some time on oil fuel, is now sufficiently developed in regard to the combustion apparatus for a demonstration to be made of its performance on pulverised coal.

### Royal Commission on New Zealand Railways

**T**HE establishment of a corporation to manage and develop the New Zealand Railways is the principal recommendation made by the Royal Commission on the New Zealand Government Railways, whose report has now been made to the Government. Evidence given before the Commission, which was composed of Sir John Allum, Mayor of Auckland (Chairman), and Messrs. W. O. Gibb and C. V. Smith, was summarised in our July 11 issue. The first sitting was in Auckland on March 24 and the hearing was completed on May 27.

Since 1928 seven men have occupied the position of General Manager of the railways, an average term in office of less than four years, says the report. "The unwisdom of these relatively rapid changes has been well demonstrated in the matter of the proposal to electrify the North Island Main Trunk. The last general manager recommended the Government to adopt his proposal and make an immediate start on the electrification, and the Government accepted the scheme in principle. The present General Manager holds a different view: he believes that electrification can wait and he desires to develop an alternative proposal for consideration," the report adds.

Other important recommendations aim at increasing staff and adjusting charges after full analysis of individual tariffs has been made. Dislocation created by the strike, lack of staff and rolling stock, competition from motor transport and shipping congestion all combined to make train running difficult. The Commission found that, making allowances for all these factors, there had been a lowering of the standard of service to the public. Railways were no longer a monopoly, but had to face the competition of road and air services and the motorcar. Disadvantages such as high charges and lack of flexibility that the railways might suffer compared with road or other transport could be offset in some measure by service and goodwill. The cancellation or alteration in the times of train departure, and the slow delivery of goods, though caused by outside factors, were irritating, tending to make the public look elsewhere for transport service, with the danger that when the service was improved the customers might not be regained.

Though most of the railway revenue came from goods traffic, in the minds of the public railways were associated with passenger traffic and dissatisfied passengers could be the indirect means of losing goods traffic; on the other hand, a high standard of passenger traffic could have far-reaching effects in other branches of the railways.

One of the main obstacles preventing the railways from giving an adequate service and greatly improving its financial position is shortage of staff. The railways are in a different category from any other Government Department. They are a trading concern without the monopoly of the Post Office and in competition with other forms of transport. Although the department should not be given a free hand to compete for labour, the service should be made more attractive than at present. There should be an immediate effort to provide sufficient houses to meet the department's needs by the import of prefabricated houses,

the grant to the department of more State houses, or the building of houses by railway staff, or a combination of all three methods.

An intensive staff recruiting campaign should be conducted overseas to bring to New Zealand a complete shipload of trained men or men willing to be trained for locomotive operating or for the workshops. To assist in this campaign, the possibility should be explored of obtaining young men from Britain on, say, a three-year contract basis, with the option to return at the end of the period. To encourage railwaymen to remain with the department a long-service increment should be awarded at the completion of each five or ten years of service. Salary scales should be revised and a determined effort should be made drastically to reduce annual leave in arrears.

With the prospective development of railcars, diesel-electric and electric traction bringing faster and more frequent services, passenger traffic should increase, and it was all the more important, therefore, that a high standard of service should be instituted. "It is clearly established," says the report, "that long-distance transport is a special function of the railways, which should be fully protected in giving that service. There is also little doubt that on occasions the transport of goods by road is essential. Therefore, if the railways are to be effectively protected, we recommend that the position of current licences authorising the carriage of goods in competition, or substantially in competition with rail, be reviewed, and that no more licences be issued."

Adequate supplies of coal, oil, and electricity are available to the railways. Within three years, the mines should be making available adequate amounts of coal and thenceforward an annual increase of 5 per cent. could be met, assuming a change to coal of the oil-burning locomotives. The problem of oil is its cost, which, since September, 1951, has risen from £8.50 to £21 per ton. The estimated electricity consumption of the department in the North Island in 1961, allowing for railway electrification of the Main Trunk, and the Auckland and Wellington suburban railways, is only about 5 per cent. of the estimated total consumption for all purposes for the North Island that year. The General Manager of the State Hydro-Electric Department saw no reason why the railways estimate should not be met, provided sufficient notice was given.

The Commission could not recommend that dining cars be reinstated. The installation of buffet cars, although an added convenience to the public, would reduce the paying load and thus increase the loss on passenger traffic. Public relations should be developed by the appointment of a special public relations officer, attached to the publicity branch but working in close association with the General Manager.

Because of the differences of opinion contained in submissions by the present General Manager and the Chief Mechanical Engineer, on one hand, and their predecessors on the other, the Commission was unable to express an opinion whether the number of locomotives in stock and on order would be sufficient for the next ten years. Given a larger staff the existing workshops and their capacity could cope with requirements for some years.

To preserve continuity of policy, disrupted by too frequent changes of management, no officer should be appointed to a key position classed as a "special appointment" unless his appointment can be made for a period of not less than seven years. The Corporation which the Commission recommends, on the model of the National Airways Corporation, shall be called the New Zealand Railways Corporation. It shall consist of five directors, appointed by the Governor-General, who shall appoint one as chairman; three shall be full-time railwaymen and two appointed from persons outside the railway service, to allow the views of commerce and industry to be fully appreciated. The General Manager shall be appointed by the Corporation. The capital of the Corporation shall be £88,070,000, the capital used in the railways undertaking at March 31, 1952, on which it shall be under no obligation to pay interest. The Commission concludes its report by reiterating its belief in the future of the railways and that they can be run without loss.



## East African Transport Possibilities

THE railway system in East Africa is capable of considerable development, but in the view of Sir Reginald Robins, Commissioner for Transport, East Africa, there will be no necessity to consider doubling sections for many years. Sir Reginald Robins, who was speaking in Dar es Salaam, said that experience in North America and South Africa proved that the single lines could be greatly increased in capacity; that of a particular single line in South Africa was increased from 34 to 44 trains with hardly any change in the average scheduled running time per train. On no section of the East African Railways had they nearly approached this density. The capacity of the system in East Africa could be considerably increased by the introduction of heavier locomotives, more frequent crossing stations, centralised traffic control, and modernised signalling. On some sections, relaying with heavier rail would enable larger locomotives to be used, and in any case would be much cheaper than doubling.

The railway in Uganda was being extended towards the Congo border. If the present development of power and other resources at Jinja was successful, it is quite probable that that area would become industrialised. A case might then exist for realigning the present main line into Uganda to shorten the distance to Jinja. Extension from Uganda towards the Sudan was unlikely. In Kenya, possible extensions would be mainly of the existing branch lines to tap further areas.

Sir Reginald Robins was convinced that a connection between the Central and Tanga lines in Tanganyika and the main Kenya & Uganda section would be built, though he could not say when. Apart from the development of the area there was also the question of relieving the pressure on the workshops in Dar es Salaam. The present law governing the operations of the East African Railways & Harbours precludes the Administration from providing services gratuitously or at less than cost. Some of these extensions, in the earlier stages at any rate, might therefore have to be guaranteed or subsidised by the Governments.

In the Southern Province of Tanganyika an outlet from the northern end of Lake Nyasa to the coast at Mtwara would have to be provided. This might be made either as part of a connection with the Rhodesian system or as part of the existing Southern Province system. Access would also have to be given from the coalfields, if they are proved and the quantity is sufficient, either to a railway running south from the present Central line, or to the Southern Province Section, to distribute mining products.

Reports of surveys of possible connections between the East African system and the Rhodesian system, and the reports would shortly be under consideration. It was "more than likely" that it would be a question of time before the two systems were completely connected as the fact that the Rhodesian system is 3 ft. 6 in. and the East African metre gauge posed serious questions. The East African system would ultimately be converted to 3 ft. 6 in. and would probably adopt a common braking system with that of the Rhodesias and South Africa.

There was a very long life yet for the steam locomotive in East Africa. With the introduction of heavier rails and the use of larger locomotives, requirements could be met for years to come. A decision on whether or not to introduce main-line diesel power would depend much on considerations of fuel. The present Asian and African staff thoroughly understood the steam locomotive, but maintenance of diesel locomotives required much more skill and working to much tighter limits.

There would be an increased use by those who could afford it of the motorcar and air services. On the railway the tendency would be to close the gap between the first, second, and third class fares, with a simplification of the facilities offered. No section of the East African Railways was really suitable for high-speed luxurious passenger services. Suburban development would probably be met by road rather than rail transport.

Sir Reginald Robins visualised the railway being pushed

into new areas with a road fleet at railhead, serving a further advanced area, and in due time the railway going into that advanced area and the road fleet advancing a like distance. The connection between the East African and Rhodesian systems might be developed in that way. He foresaw a substantial advance in the use of mechanical appliances operated by staff who would be paid good wages, made possible by reason of the greater output.

Much had been achieved in co-ordinating transport in East Africa by the creation of the High Commission and the Central Legislative Assembly, and a post of Commissioner for Transport answerable to the Assembly for certain forms of transport. Sir Reginald Robins believed that the Central Authority should be responsible in the future for the policy of both construction and operation of inter-territorial and international trunk roads. The general tendency in the future would be, he thought, to train transport administrators who would have experience and knowledge of the principles of the major forms of transport, and not necessarily be specialists in one form of transport.

## Nationalised Industry

IMPENDING changes in the structure of nationalised transport and the steel industry in Britain enhance the academic quality of a book of essays by some economists, "Problems of Nationalized Industry," of which a short notice appears elsewhere in this issue. It is disappointing that extensive experience of nationalisation in this country has not led to more definite conclusions on its advantages and drawbacks. The question is discussed by Sir Arthur Salter in his essay on the crux of nationalisation. No solution, he points out, has been found to its inherent problems and dangers. One of these is the replacement of the "pervasive, intimate, and powerful compulsions of the profit and loss system." As a former civil servant, he acknowledges the zest, good teamwork, and efficiency of servants of public undertakings—in some conditions. These, in his experience, include the novelty of the task undertaken—the creation of a novel enterprise is itself an inspiration, and "it is impossible to expect such teamwork or such ardour . . . throughout the long years of normal administration." In nationalised industry, he maintains, there is nothing which encourages and compels efficiency, adaptability, initiative, and the scrapping of the obsolete so much as "the ever-present consciousness of possible gain and possible ruin," and he speaks of the Civil Service tendency to perpetuate organisations created to meet a temporary need.

This applies less to transport, where there has been awareness, at least among an important section of the staff, of the statutory obligation on nationalised transport to pay its way; many maintain, however, that such awareness was more widespread, in the railways, for instance, under private ownership. Sir Arthur Salter expresses his gratification that the Transport Act, 1947, allows the "C" licence-holder to carry his own goods in his own vehicles as a spur to efficiency in nationalised transport; but he points out that the original proposal in the Bill—amended under external pressure—to remove this external standard of efficiency, showed imperfect realisation by the Government of the main administrative problem of nationalisation.

The second crucial problem in nationalised industries, according to Sir Arthur Salter, is "collective bargaining." He warns of the dangers of passing on increased costs, arising from wages increases, to the consumer "where there is no compelling necessity for restraint recognised by both sides." The national basis on which railway staff and labour matters were treated in the years before nationalisation detracts from this argument as it applies to the railways, where for many years past there could not be, as there have been in other industries, "a few painful but salutary bankruptcies of particular competing units." There is nevertheless the constant danger that workers in a nationalised industry may be tempted to feel that wage increases ultimately can be borne if necessary by the taxpayer, or that obligations can be repudiated.

Centralisation is one of the biggest problems of



nationalisation. Mr. Frank Pickstock has drawn attention in a Fabian Society pamphlet to some defects of the centralised departmental system now in force on British Railways: the development by departments of their own practices irrespective of the needs of the undertaking as a whole; over-emphasis of the technical or "expert" point of view; and the difficulty of staff relations at lower levels where there is no "management" representative as such. Mr. Austen Albu in his essay on the organisation of nationalised industries points out the unfortunate results of the lack of responsibility, in the railways, of superintendents, stationmasters, and so on, under the departmental system. None of this, he states, is the result of nationalisation—an erroneous statement, for, as Sir Arthur Salter says, the convenience of a functional division of responsibility in great concerns is obvious, and the "presumed necessity, in a public concern, of 'uniformity' tends to favour centralised management." Those who devise the new organisation of a nationalised industry tend, therefore, to overlook the rigidity and the remoteness and impersonality in control which hamper staff relations, which evil consequences are left to develop gradually to a point at which it may become almost impossible to find a remedy. This at least has been recognised by those who drafted the new Transport Bill, but knowledge of what remedy is to be applied must await the proposals for decentralisation of the railways.

### American Transport Legislation

**D**URING the past half year a plentiful crop of Bills relating to domestic land and water transport fell to be examined by the United States Senate Committee on Interstate and Foreign Commerce. Between March 3 and April 9, the Committee received oral or written statements from 250 witnesses about 37 proposals for fresh legislation. A reprint of this testimony fills a volume of 1,712 pages, weighing 3½ pounds. The most important sections concern a Bill for amending the railway rates procedure before the Interstate Commerce Commission and another which seeks to alter the railway rate-making rule of the Interstate Commerce Act.

The first Bill is designed to remedy long delays in advancing railway rates to meet increases in costs of wages and materials. The second measure would enact that "the Commission's power to prescribe just and reasonable rates shall be exercised in such manner as to enable the carriers under honest and efficient management to earn, as nearly as may be, sufficient revenues to provide, in the interests of the Nation and the general public, adequate and efficient service, establish and maintain sound credit, attract equity capital, take advantage of technological developments, and advance and improve the art of transportation." The present rule requires the Commission to consider the effect of the rates on the movement of traffic and has led it to hold rate increases below the level actually needed, in case higher charges might drive some traffic away. The persistent pursuit of this policy has involved the railways in large losses of revenue from time to time.

From the supporting evidence submitted on behalf of the Association of American Railroads, we have culled a number of passages which throw light on the railway position in the United States. Mr. Walter S. Franklin, President of the Pennsylvania, said that an increase of 1 cent an hour amounted roughly to \$3,300,000 a year for the 137,000 employees on his railway; on April 1, 1951, wages went up 6 cents an hour, because the cost-of-living index rose 6 points, and added about \$20,000,000 in a full year to the Pennsylvania's payroll. Such large increases in expenses could not be absorbed through the normal course of economies and improvements in working. Betterments required an enormous amount of capital. For instance, at Pittsburgh freight trains could be accelerated by spending between \$40 and \$50 million on yards in that area. There would probably be a return of something like 25 per cent. on the expenditure, but the company could not raise the money. Though the Pennsylvania had spent

\$522 million on equipment alone since 1948, it was compelled to cut its wagon programme by 6,000 wagons estimated to cost \$22 million and was far below its proper stock of serviceable wagons. It put in only 50,000 tons of rail last year, when it should have laid down 100,000 tons. The railway was not earning enough net revenue, in spite of freight ton-miles and passenger-miles being higher today than they had ever been, except in wartime.

Mr. F. G. Gurley, President of the Santa Fe, gave the Committee "a pretty striking demonstration . . . of the advantages that can come from the new technologies, if you are able to finance them." In 1951 the Santa Fe moved double the number of ton-miles worked in 1929 and 79 per cent. more passenger-miles. In the two years the railway employed almost the same number of 65,000 people, while the wages bill increased 145 per cent. Admittedly the U.S.A. railways have too few wagons to cope with traffic fluctuations. Mr. Gurley's own line purchased its full proportion of new wagons in recent years. He attributed the shortage to lack of confidence on the part of some railway managements since 1947, because they feared sufficient money was not available to provide all the things which were needed.

A statement lodged by Mr. C. McD. Davis, President, Atlantic Coast Line, showed that operating expenses of his railway rose from \$39.7 million in 1939 to \$128 million in 1951, an increase of 223 per cent. Increased rates authorised by the Interstate Commerce Commission would not have offset the rise in expenditure, even if there had been no time-lag in putting the higher charges into force. The inevitable result was the deterioration of working capital and the dissipation of cash. The Coast Line had been forced, Mr. Davis said, to curtail maintenance programmes. It had, however, accelerated the substitution of diesel for steam motive power with the object of improving efficiency and effecting economy. Apart from a few branches, Coast Line is now completely "dieselised." In 1952 it will be called upon to make instalment payments of over \$8 million on rolling stock purchased with borrowed funds. That is obviously a heavy burden on a company whose net railway operating income in 1951 was only \$10 million.

Each of the three railway chief officers explained forcibly the difficulties which are hampering his own system. Mr. J. H. Parmelee, Vice-President, Association of American Railroads, supplied a comprehensive survey of past and prospective operating trends in the railway industry as a whole. His impressive statement, backed up with pertinent statistics, will be useful for future reference, apart from its immediate purpose of enlightening the Senate on the railway problem. At the close of what the Chairman of the Committee called "a very splendid presentation," Mr. Parmelee summed up his case in these words. "The facts I have developed seem to me to show that, despite high traffic levels, increased operating efficiency, and an improved capital structure, railroad net earnings are inadequate. Although relief has been afforded the railroads in the form of increased rates, fares and charges, they have not been sufficient to offset rising costs. Furthermore, the authority for such rate increases has usually come along after the increased costs they are intended to cover have become effective. If the railroads are to perform their appointed task, and under efficient and economical management are to supply adequate transportation services in the interest of the general public, they should have the opportunity to earn an adequate net income."

It will be instructive to see what comes of this appeal to the Senate for amelioration in existing restrictions on the U.S.A. railways. Many of the statements made in Washington D.C. would apply with little change to conditions in this country. Recent events cannot have modified the opinion expressed by the British Transport Commission in its 1950 report that its future outlook depended largely on the provision of resources to re-equip and remodel our transport system, coupled with a scheme for the rapid adjustment of rates and charges to current costs, so as to avoid continual deficits.

## LETTERS TO THE EDITOR

(The Editor is not responsible for opinions of correspondents)

### Flat-Bottom Track Fastenings

July 19

SIR,—We have read with great interest in your July 18 issue the summary of the accident report on the derailment near Weedon on September 21, 1951. We quite understand the desirability of keeping the summary as brief as possible. Nevertheless, we feel that the final sentence of the actual report, quoted below, while containing a few more words than the final sentence of your summary, is much more informative:—

"In addition, therefore, to its advantages over bullhead track of increased lateral and vertical strength, it is clear that flat-bottom track of this design, with shallow base plates and elastic spike fastenings, is less vulnerable to damage by derailed wheels."

Yours faithfully,

L. S. SANSON

Elastic Rail Spike Co. Ltd., Cory Buildings,  
117, Fenchurch Street, E.C.3

### Groundnut Transport Problem in Nigeria

July 19

SIR,—Some prominence has been given to a recent speech by Chief Bode Thomas, Nigerian Minister of Transport, detailing the difficulties with which the Nigerian Railway has had to contend in moving arrears of groundnut traffic. [See our July 18 issue.—ED., R.G.] The same speech was made the occasion for a leading article in *The Times* of July 11 commenting on apparent shortcomings on the part of the Nigerian Railway and its failure to transport the Nigerian groundnut crop of 1951-52. I trust that you will be good enough to publish the following facts in regard to what this railway is doing.

First, during the five months up to and including March, 1952, the total tonnage of groundnuts and groundnut products, which include groundnut oil and cake, amounted to 129,000, which period, it is to be noted, included the locomotive drivers' four weeks of "go slow." Up to the end of June, 1952, the total tonnage of groundnuts and groundnut products moved by the railway was 206,000 tons.

Second, the statement in *The Times* that the ports are congested is hardly correct in so far as the rail-served Apapa Wharf is concerned, where the transit sheds for the past two months have been seldom more than half full, whilst empty wagons are being moved away from the wharf area on most days. It must be admitted that the rate of discharge from ships is low, but this work is performed by contract labour and active steps are now being taken in an attempt to improve this working.

Third, because the railway is not at once able to transport a record groundnut crop, critics should not jump to the conclusion that the railway is in poor shape. That it is not is indicated by the paying net ton-miles for twelve months ending March 31, 1952, totalling 554,230,000, which is the second highest in this railway's history, the highest being 578,730,000 net ton-miles in 1949-50. Had it not been for the locomotive drivers' "go slow" strike in December and January, which lasted approximately four weeks, the net ton-miles on the average for the rest of the year would have reached 580,000,000 which would, of course, have been a record.

Fourth, *The Times* leading article alleges bad driving and bad maintenance, but I should like to ask by what standards such judgment is passed. It needs to be realised that this is not a section of British Railways and the source from which we draw the majority of our staff has a very different educational background and we lack the facilities with which to produce high-class technicians. The standard of Ebute Metta workshops and running shed may not be up to that of Crewe, but I refute and resent most strongly the use of the word "bad."

Fifth, it is necessary to refer to the acute difficulty in obtaining spare parts from the United Kingdom, the supply of which certainly has not improved greatly. There are still outstanding some items of spare parts from orders placed in 1949, whilst in response to further urgent orders placed by the Crown Agents earlier this year we have been informed that delivery may be expected in 1954 or 1955. When supplies of spares are not forthcoming the railway has to do its best to manufacture in its workshops and, when this is done, it means that the machines have to be set aside for this purpose and locomotive repair is delayed.

Finally, in anticipation of possible increased traffic, an order was placed early in 1951 for seven new locomotives which were promised for delivery in May this year, but they have not materialised, nor are they likely to do so before October. Had they been received to time they would have at once stepped up the clearance rate of groundnuts, which should have been cleared by the end of 1952.

Yours faithfully,

D. C. WOODWARD,  
General Manager, Nigerian Railway

Ebute Metta, Nigeria

### The Rise of the Diesel Locomotive

July 14

SIR,—Our American friends dearly like an "all-time high record." They found one in May when 689 steam locomotives were withdrawn from service. Two new steam engines were installed during the month and 264 diesels, composed of 317 power units. The Association of American Railroads reports that on June 1 the number of diesels, expressed in power units, was 19,082 and for the first time exceeded steam locomotives, 18,489.

The rate at which oil is outstripping coal as a source of energy is startling. In 1950 the U.S.A. Class I railways paid \$323 million for coal and in 1951 only \$277 million, a decrease of \$46 million, or 14 per cent. In 1950 they paid \$172 million for diesel oil and in 1951 nearly \$229, an increase of \$57 million, or 33 per cent. The changeover in railway motive power helped to reduce the pithead price of bituminous coal below the 1948 level.

Yours faithfully,

R. BELL

Frognal, N.W.3

### Glasgow to Aberdeen via Dundee

July 10

SIR,—Much has been done already to give Scotland the benefits of a unified railway system, and it would be a further step in this direction if some of the trains between Glasgow and Aberdeen could run from Perth via Dundee, Arbroath, and Montrose. The main line of the former Caledonian Railway from Perth to Aberdeen is at a disadvantage, in that, with the exception of Coupar Angus and Forfar, it does not pass through any towns between Perth and the junction with the East Coast Route.

The distance from Perth to Aberdeen via Dundee is less than three miles longer than that via Forfar, and by the diversion of traffic to this slightly longer route, Arbroath and Montrose could be reached from Glasgow and Perth without changing.

Admittedly, Coupar Angus and Forfar would require connecting services to and from Perth and Aberdeen, but this should not be an insurmountable difficulty. Moreover, their combined populations are well below that of Arbroath, and little more than that of Montrose.

Yours faithfully,

H. A. VALLANCE

The Railway Club, 57, Fetter Lane, London, E.C.4

## THE SCRAP HEAP

### Détraqué

The stationmaster at Equator, East African Railways & Harbours (the Equator actually passes through the station premises) had occasion recently to report circumstances which nearly led to a collision. The pointsman had received a train on to a line on which another train was already standing, and the stationmaster's final conclusion as to the cause, which may serve as a model of conciseness to inspecting officers, was "pointsman mad."

### Argentine Railways

It is not very gratifying to find President Pelligrini still harping on the iniquities of the Argentine guaranteed railways. He complains that . . . never yet has any company paid a shilling into the National Treasury. . . . President Pelligrini talks very enthusiastically about the growth of Argentine export trade in the last year, forgetting that the improvement has been rendered possible only by railways built with British capital.—From "The Financial Times" of June 27, 1892.

### "Bullseye" for Berlin

A replica of a typical London Transport bar-and-circle station nameplate is now displayed permanently at the Wittenbergplatz station of the Berlin Underground Railway. It has been presented to London Transport to mark the 50th anniversary of the Berlin U-bahn system. The plate, which is in

the usual red, white and blue enamel, framed in bronze, is mounted on an oak panel. It was handed over, on behalf of London Transport, to the Berliner Verkehrs-Betriebe by Major-General C. F. C. Coleman, General Officer Commanding Berlin (British Sector).

### Railcar Names

Criticism has been voiced that Western Region railcars have been named *Wren* and *Thrush*. It had always been supposed that the Eastern Region claimed priority in regard to Birds. With so many Grand names to choose from, surely the Western Region could have named their cars *Grandpa*, *Grandma*, *Grandad* or *Grandsire*.

### Not the Lion's Share

A black and white bull, trespassing on the Kenya-Uganda main line near Tsavo, was captured by an African pointsman, who duly delivered it to the stationmaster at Kenani. Extensive enquiries by railway police in the area failed to trace the owner, and a month later the bull was still at Kenani, causing considerable concern to the stationmaster, as he had no proper cattle compound and he was afraid to turn it loose because it would undoubtedly have been eaten by prowling lions.

In desperation, the police inspector suggested that the animal might be sent to the railway lost property office in Nairobi, for disposal according to regulations. This suggestion could not be

adopted, because there was no cattle loading ramp at Kenani. The problem was resolved by handing the animal over to the station staff for slaughter and suggesting that they might care to share their rations with the nearest engineering gang!

### Re-Volt-ing

On June 5 this year the first electric train ran between Paris and Lyon-Perrache . . . this makes bitter reading for most members of our Society, but there is, unfortunately, more to come for it has been decided that the famous "étoile d'Ambérieu" is also to be electrified by 1954. This is the name given to the lines Lyons-Ambérieu, Ambérieu-Mâcon, Ambérieu-Culoz, and their electrification will mean electric traction between Paris and the extreme south of Italy.—From "The Journal" of the Stephenson Locomotive Society.

### In Praise of Electrics

*A reply to the verses we have published from time to time on the relative merits of steam and diesel traction.*

First a steam loco had its say,  
That relic of an early day.  
"Siren Song"?—like a wheezy fan,  
"Glamorous"?—as an old oil can.  
Its sole attractions for small boys  
Are lots of splutter, smoke and noise;  
Poor travellers must all beware  
Of sooty smuts on clothes and hair,  
With soot on all door handles, too,  
To foul the hands or gloves you'll rue.  
Ravenous consumer of coal,  
In our poor stocks it makes a hole.  
Thermal efficiency, forsooth,  
Of only five per cent! Oh 'struth!  
With wasteful things let's do away—  
Have something worthy of today.

Next the diesel put in a plea,  
Seemed to imagine it could be  
Just the thing we are waiting for  
And yet it's just another sore.  
At a cost three times that of steam  
It's hardly an attractive scheme.  
Dependent, too, on foreign "juice,"  
Shouldn't we put our heads in a noose  
If we found in a future war  
That we could get the oil no more?  
Our troops would get no more  
supplies—  
"Twould be too late then to be wise.

Welcome to electric traction  
Which requires only a fraction  
Of all the precious coal which our  
Present steam locos do devour.  
If all the railways in this land  
Were electrified, we should stand  
To save nine million tons a year  
Of our coal which is now so dear.  
Furthermore, electric trains are  
Cheaper to operate by far.  
And cleaner too—no smuts, no smoke  
Or pungent fumes to make us choke.  
So let us change and not delay—  
It's just the thing we need today.

W. C. J.

E 2



"Bar-and-circle" station nameplate presented by London Transport to the Berlin Underground to mark the 50th anniversary of the Berlin U-bahn system



## OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

### NEW ZEALAND

#### Drivers Refuse to Man Diesel-Electrics

Auckland drivers have refused to man the new diesel-electric locomotives in their present form on main line passenger services. Alterations to the locomotives, the drivers allege, have made them unsafe. They refuse to operate the locomotives running backwards and with one man in control, contending that they are not running as they were constructed to run, but have had the controls altered in New Zealand to eliminate one man in the cab, reducing the safety margin.

No protection is provided for the driver, they say, in the event of level-crossing mishaps and no provision is made for the exchange of tablets. The drivers hold that the locomotives should be used for the purpose for which they were built, shunting, and be manned by two men.

### EAST AFRICA

#### Railways & Harbours Exhibition

The first Royal Agricultural Show to be held at the new Mitchell Park Show-ground at Nairobi was held from June 18 to 21. The East African Railways & Harbours exhibition, housed in a permanent pavilion, which was planned by the Administration's architect, was designed to show the activities of the Chief Mechanical Engineer's Department.

Photographs showed how heavy repairs to a Beyer-Garratt locomotive are carried out stage by stage, the manufacture of insulated vans for the transport of meat, the building of a restaurant car, and types of locomotives in service.

Statistical diagrams, graphs, maps, and models were also included. An annexe to the main pavilion housed three large machines from the Mechanical Workshops, Nairobi, at which the public saw skilled African and Asian operators at work.

Kibera Station, adjacent to the show-ground, was rebuilt to provide adequate facilities for handling traffic for the Show. During the Show one of the new "29" class 2-8-2 locomotives and several items of new passenger and goods rolling stock were on display at the station.

### CANADA

#### Transfer of Selkirk Locomotives

The Selkirk type locomotives of the C.P.R. now are being used in Southern Alberta, where they now haul freight between Calgary and Medicine Hat, and between Medicine Hat and Swift Current. They were displaced on the Calgary-Revelstoke section by diesel locomotives. Before the Canadian Pacific Railway could transfer them it had to spend thousands of dollars on lengthening crossing loops. Special fuel points are being built for the locomotives, which burn bunker fuel.

### IRELAND

#### C.I.E. Situation

The Minister for Industry & Commerce of the Republic, in an industrial survey, stated on July 9 that "the position of C.I.E. continued to deteriorate very seriously." The estimate made in the beginning of the year of the extent to which the Board's revenue might fall short of its expenditure was based on

last year's experience and on the expectation that higher charges would increase revenue. It was obvious that the worsening of the situation was because the gap between expenditure and revenue was continuously widening.

The Minister stated that the Dail, whether it liked it or not, would be forced to take important decisions soon on future transport policy. He hoped that the legislation for joint acquisition of the G.N.R.(I.) could be enacted in Dublin and Belfast this year.

### FRANCE

#### New Road-Rail Wagon

A new type of road-rail wagon has been proposed. A wagon capable of carrying a net load of 10 tonnes could be fitted at one end with dual axles, one axle being fitted with ordinary railway wagon wheels and the other being a form of road vehicle axle fitted with pneumatic-tired wheels. A balancing system has been devised which, it is claimed, would enable the appropriate type of axle to be used, and the apparatus locked, according to circumstances.

When it was desired to move the wagon by road, the road axle would be lowered and the other end of the wagon supported on a tractor. A special ramp would be used for the transfer from rail to road and vice versa.

#### New Enquiry Bureau at Montparnasse

The S.N.C.F. has reorganised its telephone enquiry facilities at Paris-Montparnasse. The new installation is served by eight post office lines so linked that an incoming call automatically selects a free line if one is available; formerly there were eight individual



Railways Exhibition at Nairobi: (left) Cincinnati milling machine at work, and (right) new "29" class locomotive, built by the North British Locomotive Co. Ltd., on view

lines, which often meant that an enquirer had to make several calls before finding a free line, and also threw undue work on the enquiry staff working the first lines.

#### Amsterdam-Basle Express Derailed

Four persons were killed and 18 injured when the Amsterdam-Basle express was derailed near Thionville, on the former Alsace-Lorraine line in the Eastern Region on July 1. The cause of the accident is believed to have been distortion of rails through the heat.

#### Whitsun Traffic from Paris

As at Easter, main line traffic from Paris this Whitsun was appreciably higher than in 1951. During the three days from May 30 to June 1 inclusive, 374 regular and 240 relief main line trains left the six principal termini, con-

veying in all some 437,000 passengers. The corresponding figures for 1951 were 340 regular and 196 relief trains conveying some 406,000 passengers.

#### Station Buffet Competition

To encourage good catering at station buffets on the S.N.C.F., a competition was recently organised between the 22 stations showing the best results in 1951. The first prize was won by Avignon. Hendaye and Chagny were runners-up.

### ITALY

#### Upgrading of Passenger Accommodation

The management of the State Railways has forbidden the widespread practice of upgrading passenger accommodation so as to overcome the temporary shortage of certain classes of coaches. There has been upgrading of third class coaches to

second and of second class compartments to first class, though the higher class accommodation improvised did not offer the comfort to which passengers holding tickets for higher classes were entitled.

The same order leaves it to the discretion of station or train staffs to make available on overcrowded long-distance trains first class coaches indiscriminately to first and second class passengers, while certain second class coaches may be used on the same conditions by passengers holding third class tickets.

### EASTERN GERMANY

#### Locomotive Research Institute

A locomotive and rolling stock research institute, attached to the Karl Marx works for locomotive building at Babelsberg (Berlin) was established recently.

### Publications Received

*Problems of Nationalized Industry.* Edited by W. A. Robson. London: George Allen & Unwin Limited, Museum Street, W.C.1. 8½ in. x 5½ in. 390 pp. Price 25s.—The editor, who is Professor of Public Administration at the London School of Economics, summarises in Part Two conclusions on the fourteen essays by divers contributors in Part One, of which six appeared in the special number *The Political Quarterly* for April-June, 1950. The authors of essays include Sir Arthur Salter ("The Crux of Nationalization"), Mr. Ernest Davies, M.P., on the ministerial control and Parliamentary responsibility of nationalised industries, Professor Gilbert Walker on compensation and also on efficiency; Professor G. D. H. Cole on staff and labour problems; and Professor Robson on nationalisation in France and Britain. The book is the subject of editorial comment elsewhere in this issue.

*The Premier Line.*—The Story of London & North Western Locomotives. By O. S. Nock. Hampton Court, Surrey; Ian Allan Limited, Craven House, The Green. 8½ in. x 5½ in. 239 pp. Illustrated. Price 25s.—Some cherish personal memories of the London & North Western Railway before the grouping of 1923, but it also holds a lasting fascination for many who never knew it as such but have been attracted by reminiscences and contemporary literature. The tradition surrounding Crewe, at which all locomotive work was finally concentrated some 16 years after the amalgamation, in July, 1846, of the London & Birmingham Railway, the Grand Junction Railway (which in 1845 had absorbed the Liverpool & Manchester Railway), and the Manchester & Birmingham Railway, goes some way to providing an explanation for this fascination. The locomotives were painted black, at any rate

from 1873 onwards, and the majority were not renowned for thermal efficiency. "But there was something intensely alive about them," enthuses Mr. Nock in his preface to this book. "They shrieked, they roared, they threw fire sky high; and they were nearly all named—not in any precise orderly system but with a delightful promiscuity. Above all, they belonged to 'The Premier Line,' 'The Royal Mail Route,' and the traffic they handled was prodigious." Mr. Nock traces the history of the L.N.W.R. locomotives from the early days to the grouping, discussing each design in detail and recalling some of the feats of performance achieved. His entertaining and historically valuable account is enhanced by many illustrations.

*Transport Selection.* No. 1. January, 1952. Paris. 9c: 11, rue de Milan. 7 in. x 5½ in. 94 pp. Illustrated. Price 120 fr.—The first issue of this interesting new transport digest contains extracts from more than twenty articles which have recently appeared in the general and technical press of French-speaking countries. The varied subjects covered include the helicopter, the Saharan road system, the proposed Valenciennes-Thionville 50-cycle electrification, navigable waterways in France, and French-inspired projects for underground railways in foreign cities. The layout is attractive and the diagrams are particularly clear for a pocket-size publication of this type.

*Industrial Heat Engineering.*—An illustrated booklet which covers a wide range of industrial heating requirements has been issued by the Incandescent Heat Co. Ltd. The range of equipment for which capacities are given includes among others, furnaces of standard design for heat treatment of ferrous and non-ferrous metals, bogie hearth furnaces for heavy-duty work, and a continuous flow, balanced hearth walking

beam furnace having a capacity of ten tons an hour. Other descriptive matter includes pre-heating furnaces and core-drying ovens; capacities of each are given. Foundry cupolas with mechanical charging, capacities ranging from 15 cwt. to 20 tons an hour are illustrated by a series of diagrams.

*Tornado Axial Fans.*—An illustrated brochure, No. 27, published by Keith Blackman Limited, provides considerable technical data in the form of specifications and detailed drawings relating to the range of Tornado axial fans. The range comprises fans with four aerofoil section blades, with wheels from 6 in. to 16 in. dia., for operating under free inlet and discharge conditions, and also against moderate resistance conditions. Performance graphs are included.

*The Brush Aboe Journal.*—A news item in the June issue of the *Journal* published by the Brush Aboe group illustrates the power bogie and coachwork of some diesel-mechanical railcars and trailers supplied to the Jamaica Government Railway by D. Wickham & Co. Ltd. Meadows "970" supercharged engines are fitted in the bogies. Recently, also, three smaller cars have been equipped with Meadows "630" engines.

*Travel to the Continent.*—Literature distributed by British Railways on travel to the Continent this summer includes a booklet describing facilities for shipment of motorcars and motorcycles, with useful street plans of British and Continental ports showing access to steamer berths, and a cutaway drawing of the car-carrier ss. *Lord Warden*, recently placed in service between Dover and Boulogne. A coloured folder also has been issued descriptive of the "Golden Arrow" service between London and Paris, with a short account of places of interest passed on the way.

## British Developments in Gas Turbines

*Design for a coal-fired open-cycle gas-turbine locomotive of 1,800 h.p. at turbine shaft*

MUCH interesting information on experiments now being conducted in this country in the use of coal as a gas-turbine fuel, was included in the thirty-eighth Thomas Hawksley lecture presented recently to the Institution of Mechanical Engineers by Dr. H. Roxbee Cox, chief scientist, Ministry of Fuel & Power.

The conventional external combustion engines burning coal, although capable—particularly the steam turbine—of further improvement, have reached a stage of development where major advances in overall economy are no longer possible. Great changes, says Dr. Roxbee Cox, are more likely to come from other types of heat engines, and the development of the gas turbine in Great Britain for aircraft, and in Switzerland for industrial purposes, points to the need for examining the possibilities of the industrial gas turbine against the British background, and hence to the study of the industrial gas turbine with coal as the fuel.

The majority of gas-turbine plants make small, and in some cases no, demands for cooling water. There is in consequence little restriction in their siting. Also, the absence of steam boilers and the necessary buildings for their components, which account for almost two-thirds of the cost of conventional steam-turbine power stations, is attractive from the point of view of capital cost. This advantage must be affected to some extent by the air

heaters and heat exchanges of gas-turbine plants, and by the cost of certain gas-turbine components, but is not thereby counteracted. Gas-turbine efficiencies, which vary greatly with the design, are similar to steam-turbine efficiencies. On the thermal efficiency basis alone the gas turbine has great promise.

It is the policy of the Ministry of Fuel

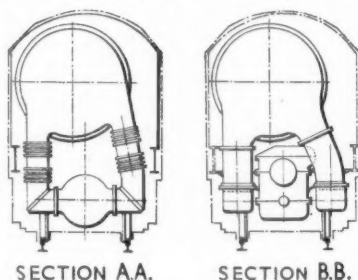
Collaboration between departments, so that problems of common interest can be discussed, is exemplified in the Industrial Gas Turbine Development Committee, of which the Chairman is Sir William Stanier, former Chief Mechanical Engineer, L.M.S.R.

### Locomotive Developments

The Ministry of Fuel & Power, after consultations with the Railway Executive, British Railways, has ordered from C. A. Parsons & Co. Ltd., and the North British Locomotive Co. Ltd., an open-cycle external-combustion coal-burning gas-turbine locomotive; C. A. Parsons & Co. Ltd. is making the gas turbine, and the North British Locomotive Co. Ltd. the mechanical portion. The locomotive, arranged with mechanical transmission, will be powered by a gas turbine of 1,800 h.p., giving a maximum rail horsepower of 1,600.

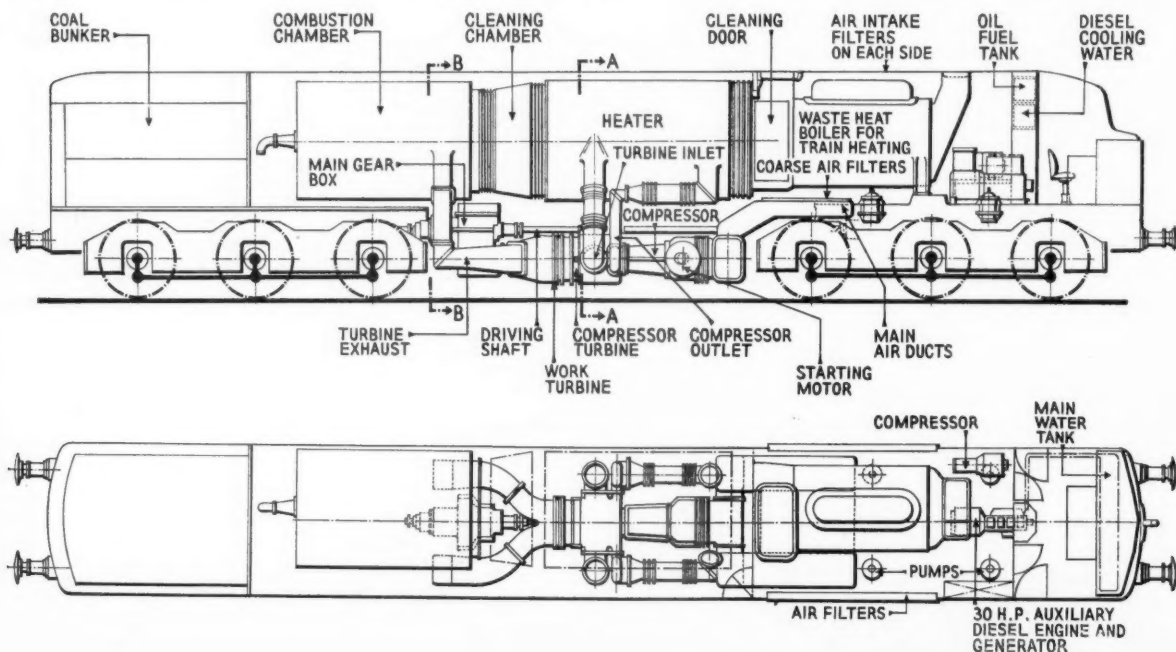
Thermal efficiency is expected to be 10 per cent. at one-tenth load, 16 per cent. at half load, and 19 per cent. at full load. Calculations of fuel consumption for the Glasgow-London run indicate that it should be about half that of a conventional steam locomotive. The fuel capacity of the bunker is six tons, which it is considered will be sufficient for 500 miles running. A two-stage gearbox will ensure that both passenger and freight trains can be efficiently hauled.

Top speed in normal running, when geared for a tractive effort at starting



Sections through locomotive (see below)

& Power to provide the means for long running under practical conditions of gas turbines which, though necessarily of an experimental nature, are designed for industrial duty, and of sizes sufficient to provide reliable and cost data. The decision to work on gas turbines to use indigenous fuels filled the gap which was still apparent in the national research and development programme when the work on liquid-fuel gas turbines was well advanced.



Elevation and plan view of the proposed locomotive. (Heater and mixing chamber omitted)



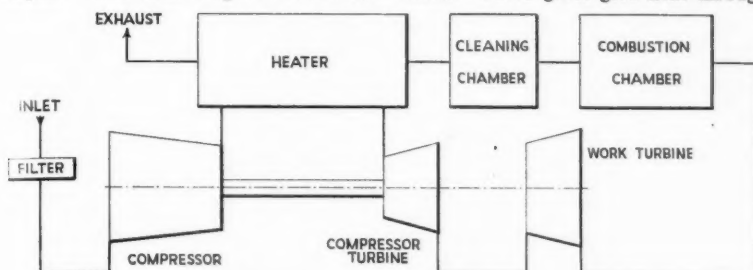
of 30,000 lb., will be 75 m.p.h. In the low-speed range the locomotive will have a maximum tractive effort of 45,000 lb. and a maximum speed of 50 m.p.h. The total weight is estimated

Exhaust air from the work turbine is partly used for combustion and partly to reduce the temperature of burnt gases before they enter the air heater. These gases give heat through

turbine provides the power output. The torque characteristics of the power turbine resemble those of the conventional steam locomotive permitting direct drive. Train heating is provided by a steam boiler heated by the hot gases from the air heater on their way to atmosphere.

The principle characteristics of the locomotive are as follow:—

Power at turbine shaft	1,800 h.p.
Maximum rail h.p.	1,600 h.p.
Gauge	4 ft. 8½ in.
Length over buffer beams	64 ft. 6 in.
" overall	68 ft. 6 in.
Maximum width	8 ft. 8 in.
" height	13 ft.
Wheel diameter	4 ft. 6 in.
Total weight	117 tons
Maximum axleload	19.5 tons
Normal maximum speed	75 m.p.h.
Starting tractive effort	30,000 lb.
Maximum tractive effort, in low-speed range	45,000 lb.
Maximum speed, in low-speed range	50 m.p.h.
Fuel capacity	6 tons (500 miles)
Maximum turbine temperature	1,300° F
" heater temperature	1,500° F
" speed of power turbine	8,000 r.p.m.



Cycle diagram of the gas turbine locomotive

at 117 tons and maximum axleload 19½ tons. Overall dimensions will be: length overall, 68 ft. 6 in.; maximum width, 8 ft. 8 in.; maximum height, 13 ft.

the walls of the tubular air heater to the compressed air — the working medium — on its way to the turbine. The compressor is driven by high-pressure turbine and the low-pressure

## Steam and Water Mixing Valve

*Thermostatically controlled hot water supply for washing facilities*

A NEW design of a steam and water mixing valve has recently been evolved and manufactured at the Wolverton Carriage & Wagon Works, L.M. Region. Known as the Wolverton type, the valve is thermostatically controlled, and has been designed for use in connection with staff washing facilities.

Construction is such as to supply a given quantity of water at a pre-determined temperature through sprays fitted over wash basins. The type now in use is set to supply two gallons of water a minute at a temperature of 110° F. This quantity is stated to be sufficient for 20 sprays; the working pressure is 50 lb. per sq. in.

The valve proper is constructed of four principal parts: thermostat; thermostat outer casing; steam and water admission valves; and the fitting for thermostat adjustment. The thermostat consists of three tubes fitted one inside the other, containing at one end a stainless steel valve, and at the other a fitting carrying a coil spring which keeps the valve back from its seating, so that expansion of the thermostat is always in the forward direction.

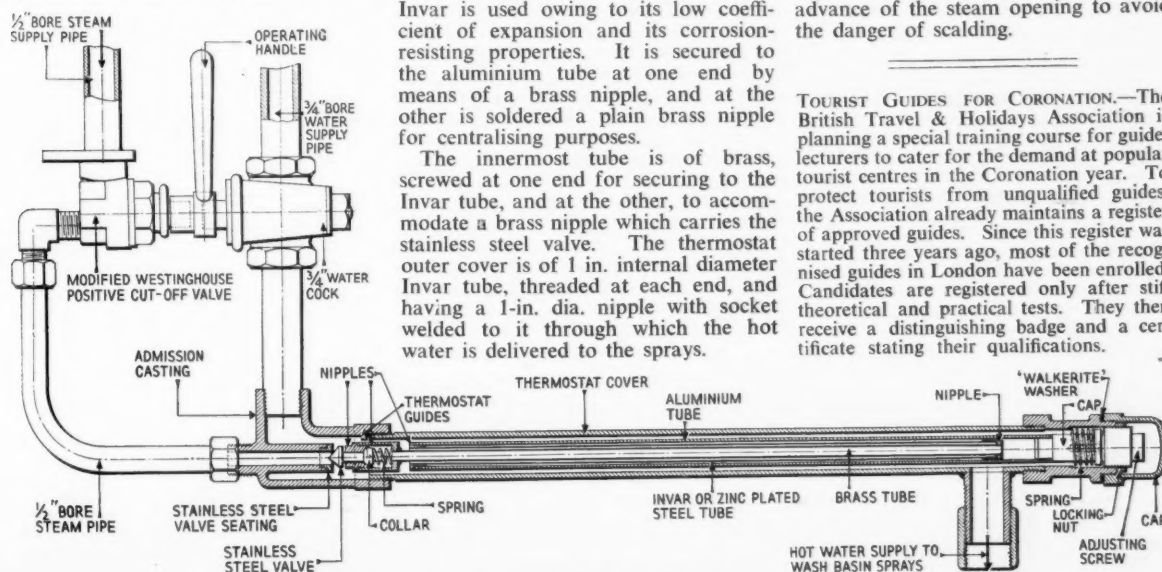
The outer tube of the thermostat is of aluminium, ¼ in. outside, and ⅝ in. inside diameter, screwed internally at each end, to which is secured an inner tube of either Invar or zinc plated steel. Invar is used owing to its low coefficient of expansion and its corrosion-resisting properties. It is secured to the aluminium tube at one end by means of a brass nipple, and at the other is soldered a plain brass nipple for centralising purposes.

The innermost tube is of brass, screwed at one end for securing to the Invar tube, and at the other, to accommodate a brass nipple which carries the stainless steel valve. The thermostat outer cover is of 1 in. internal diameter Invar tube, threaded at each end, and having a 1-in. dia. nipple with socket welded to it through which the hot water is delivered to the sprays.

The thermostat assembly is secured to a combined steam and water mixture casting containing a stainless steel valve seating and three guide lugs for centralising the thermostat and valve. Adjustment of the thermostat is by an adjusting screw in a retaining casting. A brass end cap is provided to facilitate the removal of the thermostat from the casting.

Steam is supplied to the mixing chamber through a modified Westinghouse positive cut-off valve. This is coupled with a ¼ in. water cock, and operated by a downward movement of the operating handle. The port opening of the water cock is set slightly in advance of the steam opening to avoid the danger of scalding.

TOURIST GUIDES FOR CORONATION.—The British Travel & Holidays Association is planning a special training course for guide-lecturers to cater for the demand at popular tourist centres in the Coronation year. To protect tourists from unqualified guides, the Association already maintains a register of approved guides. Since this register was started three years ago, most of the recognised guides in London have been enrolled. Candidates are registered only after stiff theoretical and practical tests. They then receive a distinguishing badge and a certificate stating their qualifications.



Details of the thermostatically controlled mixing valve

## Fitted Container for Unpacked Baths

*A novel means of preventing damage to consignments in transit*

A NEW method of packing porcelain-enamelled cast-iron baths has been devised by the Commercial Superintendent, North Eastern Region, British Railways, in collaboration with Ideal Boilers & Radiators Limited, Hull, which manufactures large numbers of baths. It has resulted in only one bath in every 700 in transit being damaged during the past 12 months, and even this damage was only minor chipping.

Unpacked baths are normally carried by rail at owner's risk and the risk of damage has always been considerable. Packing in crates is too costly for general adoption. From time to time

Experiments made at the works of Ideal Boilers & Radiators Limited suggested modifications and refinements which the Carriage & Wagon Engineer finally embodied in a prototype; this proved successful during an extended period of trial. In this container consignments of baths were carried safely to many parts, including the Channel Islands and Ireland. In consequence, twelve more containers were equipped and put into service.

In designing the fittings special attention was given to the convenience of those who have to use them. Two men can easily perform the loading and un-

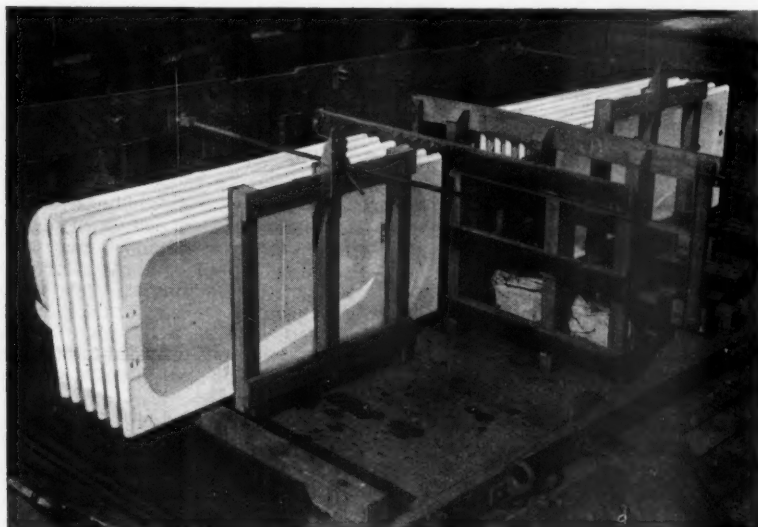
irrespective of the size of bath loaded and the number. There is space in the centre of the container between the transverse partitions to accommodate loose fittings, such as bags containing the feet of the baths.

A stool is provided on which the body of the first bath rests, the remainder nesting securely into one another. Four hard wood bearers, 4½ in. high, are laid across the container floor; the edges of the baths rest on them and the space thus afforded between the edges of the baths and the container floor can be used to lever the baths tightly into the nest.

### Method of Securing

Each nest is held secure by a longitudinal partition which fits into slots arranged at 3-in. intervals across the container floor. The top of this partition is secured by a swinging arm which engages in a U-shaped slot mounted at the top of the partition and is screwed up tight by a wing nut. The swinging arms are secured along the container sides when not in use.

In the longitudinal direction the baths are held secure by transverse partitions which can be set in alternative positions to suit the length of the baths. These partitions fit into sockets in the container floor and there are four bolts at the ends which engage into the sides of the container. Additional support is provided by a two-way folding gate swung between the centre uprights. Two detachable sheet supporters are provided and the outside of the container is well furnished with sheet-securing cleats.



*Containers with nests of baths secured in position for conveyance*

attempts have been made to devise either a simple form of packing or a safe method of loading. About two years ago the Freight Development Section, Commercial Superintendent, North Eastern Region, took up the problem in co-operation with Ideal Boilers & Radiators Limited. It was thought that there would be the minimum risk of damage if the baths were carried laid on their sides along the direction of travel. As baths thus loaded would have to be secured, the use of open containers provided with two-way partitions adjustable for different sizes and also for different quantities was entailed.

The Carriage & Wagon Engineer at Doncaster designed fittings and equipped a container experimentally. Adjustable partitions were fitted, and strip rubber, taken from worn-out motor tyres, was mounted on the insides of the sides and ends of the container and on the faces of the partitions.

loading, although the smallest size of bath weighs about 2½ cwt.

Both the sides and ends of the containers are hinged and can easily be lowered so that loading can be undertaken from either side. Normally the maximum number which can be carried in one container is 28 (14 in each compartment), but castings of bath size are subject to slight variations and there have been instances where specially tight packs have enabled loads of 30 to be carried.

The baths are nested; the only packing material used is a single strip of corrugated paper laid round the outside of the body of each bath. As this is normally used during storage of the baths it does not represent additional packing cost. As the baths in each nest must all be the same size, although the adjustable transverse partitions accommodate three standard sizes, only two sizes can be loaded in any one container at the same time.

The partitions afford full security

**FORTH BRIDGE POSTER.**—A striking poster showing an express train crossing the Forth Bridge has recently been produced by the Scottish Region for display at British Railways stations. The poster, which is entitled "Scotland for Your Holidays," is from a painting by Mr. Terence Cuneo, and gives a fine impression of both bridge and train from an unusual vantage point.

**MEASURING CONTACT LINE SECTION IN FRANCE.**—With overhead electric systems it is important to measure periodically the thickness of the contact wires to ascertain when they need to be renewed. On the French National Railways this has been done until now either by means of the Baraban apparatus which magnifies five times the profile of the wire, or by using calipers. S.N.C.F. staff employed on this work has now designed an apparatus of its own, by which one employee can take accurate readings. Its upper part is in the form of two arms pivoted at one end like a pair of scissors, the extension beyond the pivot being placed around the wire. Attached to the bottom arm is a needle approximately 6 in. long which oscillates across a graduated scale, from which can be read the thickness of the wire.

## Locomotive Rerailing after the Weedon Accident—1

*Construction of platform and ramp track for rolling up the derailed locomotive and returning it to the running lines*

**D**ERAILMENT of the 8.20 a.m. Liverpool to Euston express near Weedon, L.M.R., at 11.15 a.m. on September 21 last year, involved some unusual operations in recovering the overturned "Princess Royal" class Pacific locomotive, No. 46207. The Ministry of Transport report was summarised in our July 18 issue.

The mishap involved the engine and 13 coaches, the first eight of which were spreadeagled across the up and down lines and down the embankment to the

by the use of portable ramps, drawn back on their own wheels and placed in sidings at Weedon; whilst those which were unfit to run were placed on the embankments and in the field along with other miscellaneous debris and sheeted up pending arrangements being made for a clearance later.

The Motive Power Department, which is responsible for the clearance of wreckage in such cases made arrangements for some of the Bletchley breakdown staff to begin on Monday,

A 5-ton Bay City road mobile crane with a 30-ft. jib was obtained from the Goods Department for use in the field on the up side of the track in conjunction with the cutting up and loading on to motor lorries of the smaller debris; the motor lorries, when loaded, proceeded to Wolverton Carriage & Wagon Works, disposed of their load and returned. By this method almost all the great pile of this type of debris was moved from the site by road instead of having to be loaded by rail



*Scene after the derailment of the 8.20 a.m. Liverpool-Euston express, L.M.R., near Weedon on September 21, 1951*

left-hand side of the up main line, and thus suffered severe damage. The next five coaches were derailed, but remained upright and with the bogies still in position. Both lines were blocked and were first open to traffic about 5 p.m. on September 22.

The clearing of wreckage and repair of tracks suffered some delay due to the crane having to lift and remove coaches, coach bogies and debris which had come to rest on the embankment or in the field, to make quite sure that no persons were trapped or buried beneath them. At this time no attempt was made to load up any damaged vehicles; those which were mobile were rerailed

September 24, excavating the left-hand bogie wheels of the locomotive from the mud of the field in readiness for preliminary examination by the Ministry of Transport's Inspecting Officer on Wednesday, September 26. It was clear also that a considerable amount of oxy-acetylene cutting would be required before loading could begin. This also was taken in hand from September 24 onwards by the same staff supplemented by Motive Power staff from Willesden and Rugby and C. & W. staff from Wolverton Works. Supplies of oxygen and acetylene were arranged by the District Motive Power Superintendent, Bletchley.

cranes into wagons on the day when the remainder of the heavy debris was loaded, thus reducing the time of occupation of the running lines. This road mobile crane also moved certain debris, such as pieces of coach chassis, which were unsuitable for loading on to the lorries and which were too far from the track for the rail cranes to reach.

Portable, petrol-driven, fire pumps were available at the site, throughout, to deal with any fires which might be started by the oxy-acetylene cutting operations, and for draining water from the holes excavated under the locomotive for examination etc.

A meeting of interested departments



was called for October 2 by the Divisional Motive Power Superintendent, Crewe, at the site to lay down the arrangements to be made for disposing of the debris, partly damaged coaches, and so on.

At this meeting it was decided that all the debris which required removal by rail should be dealt with on Sunday, October 7, work to begin at 6 a.m. and continue until completion. Willesden 50-ton steam crane, manufactured by Craven Bros. (Manchester) Ltd., and Rugby 30-ton steam crane, manufactured by Cowans, Sheldon & Co. Ltd., Carlisle, and breakdown staffs, supplemented by some of the Bletchley staff, were to be employed and representatives of the C. & W. and Goods Departments would be present to watch the interests of their departments; a S. & T. fitter would be available to remove signal stay wires to facilitate movement of the cranes. Com-

of the work and before being opened to traffic.

The above schedule of work laid down to be performed on Sunday, October 7, was satisfactorily completed by 6 p.m., only small pieces of debris being left to be taken away by road. A summary of the main lifts performed on that day is as follows:—

- Two coaches lifted and loaded on to new bogies
- Two coach chassis cut into three sections and loaded into special vehicles
- One coach chassis, very badly twisted, cut into suitable sections and loaded into special vehicles
- Sixteen bogies, one of which was severely twisted and required cutting up, loaded
- Numerous pieces of bodywork, coach roofs and under structures also loaded

The damaged vehicles and debris, which had been obstructing the recovery of the engine and tender, having now been removed, the recovery of the latter had to be faced and a further meeting was called by the Motive

ton cranes available was 40 ft., at which only 16 tons can be lifted. Radius at which 50 tons could be lifted was 18 ft.

(6) The engine and tender were lying in a field of soft earth.

(7) A new bogie would require fitting under the engine to permit it to be towed to Rugby and later to Crewe.

After considering several suggestions for recovering the engine and tender, and bearing in mind that the engine was too far from the up line to be railed by a direct lift with the maximum crane power available, i.e., Crewe 50-ton steam crane manufactured by Cowans, Sheldon & Co. Ltd., Carlisle, and Willesden 50-ton steam crane manufactured by Craven Bros. (Manchester) Ltd., it was decided that the following procedure would be the most satisfactory.

(a) The tender to be rolled up on to its wheels and lifted up the bank and railed on the down line by cranes



*Pacific locomotive No. 46207 lying in a field of soft earth after the derailment*

plete occupation of both running lines would be required throughout.

Arrangements were made for new coach bogies to be provided by Wolverton C. & W. Works for certain of the coaches where the body work and/or frames were not damaged sufficiently for them to require loading up, and an estimate of the number and types of special and ordinary vehicles necessary for the rest of the loading was made.

#### Order of Operations

The sequence of the loading operation for both cranes was agreed and considered in connection with the marshalling of the various types of vehicles required and a marshalling programme was drawn up accordingly so that the correct number and type of vehicle would be available at the right time, thus avoiding tripping to and from the stabling sidings. Arrangements were made for the tracks where the cranes had been working to be examined by the Engineer's representative after completion

Power Department on October 4 to consider what arrangements would require to be made for this purpose. The following essential facts had to be borne in mind at this meeting:—

(1) The embankment at the scene was composed of soft earth which had been badly disturbed by the accident.

(2) It was the desire of the Ministry of Transport's Inspector that the engine be recovered as soon as possible and without incurring further damage or stripping off of any parts unnecessarily and that the old bogie and the engine should be despatched to Crewe Works for weighing and detailed examination as soon as possible after rerailling.

(3) The lowest part of the engine was 14 ft. below rail level and lay on its side at an angle of 15 deg. to the up main line so that at the smokebox end it was 60 ft. and at the cab end 42 ft. from the centre of this track.

(4) The engine weighed 94½ tons and the tender 27 tons.

(5) The maximum radius of the 50-

standing on the up line, after which the tender was to be taken to Weedon and held there until required later on the up line to attach to the engine.

(b) The engine to be rolled up on to its wheels by the steam cranes standing on the up line.

(c) The locomotive then to be hauled up a previously prepared track on a ramp of 1 in 22 which would ultimately bring it up to rail level alongside the up line to a suitable point for rerailling on that line.

(d) The two cranes having completed the rolling up operation, to proceed to Heyford, cross over to the down line and take up a position opposite the final position of engine 46207 at the top of the ramp.

(e) The tender of engine 46207 and the wagon containing the new bogie having been brought on the up line and stabled on the north side, and clear of the scene of operations, the bogie to be removed by the northernmost crane

and placed on the up main line on the south side of engine 46207, the tender being held in readiness for coupling to the engine after reraiment.

(f) The cranes then to lift engine 46207 off the ramp road and rerail it on the up main line, the old bogie belonging to engine 46207 being left on the ramp road.

(g) The tender which had been placed as stated in (e) would then be coupled to engine 46207.

(h) The damaged bogie to be loaded in the wagon which had contained the new bogie and this wagon marshalled and conveyed to Crewe in the breakdown train from the Crewe District.

Having decided upon this procedure, the following preparations at the site had to be made by the Civil Engineer and S. & T. Engineer.

The up side bank above the derailed engine needed strengthening by the insertion of steel piles. Double sleepers were necessary on the up main line over the length where two cranes would stand for the rolling up of the engine and tender and the lifting up and rerailing of the latter. On the down main line double sleeping was required over the length which would be occupied by the two cranes when lifting the engine off the ramp road on to the up main line.

The up line had to be tied to the down line from the commencement of the double sleeping on the up line throughout to the end of the double sleeping on the down line. Also, the up line had to be canted 2 in. away from the derailed engine over the length where the two cranes would stand for the rolling up of the engine and tender; and the down line needed canting 2 in. away from the up line over the length where the cranes would stand to rerail the engine on the up line.

A platform had to be constructed on to which the engine and tender would be righted; and a ramp track was needed from this platform to the point where the engine was to be rerailed on the up main line.

Excavation of channels was required under the leading and trailing engine (coupled) and tender wheels to facilitate the fixing of ropes. A supply of sleepers had to be made available on the field side of the engine for forming a "pack" under the engine during the early stages of rolling up. One additional telegraph pole required removal to make way for the ramp, and a signal post tie wire had to be removed.

#### Strengthening of Bank with Piles

The contractor for this work was Leonard Fairclough (Adlington) Limited. To establish the extent of this embankment which would require to be strengthened with piles, also the distance from the track at which the line of piles would require to be set, the actual positions of both crane, king pins and outriggers for each operation were marked on the web of the left-hand rail of the up main line.

The distance from the centre of the

up track to the centre of the jack screws in the end of the crane outriggers when fully extended was marked on the embankment. Eighteen pairs of Frodingham 1A sheet steel piles were then driven into this part of the embankment to a depth of from 27 ft. 6 in. to 30 ft. Each pair was

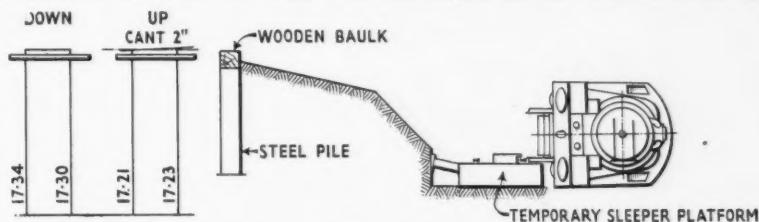


Fig. 1—Arrangement of steel piles and baulks to strengthen bank during the rolling up operation, and canting of up line where cranes stood

spaced at approximately 6 ft. centres and set at 45° to the up main line.

Baulks, 20 ft. by 20 ft., to a total length of 110 ft., were placed on the specially arranged pile heads, giving an estimated bearing capacity of each pair of piles of 65 tons. It was calculated that the outriggers bearing the maximum load would not exert a pressure of more than 50 tons.

The piles were sited to coincide with the outrigger screws of the cranes, in order to convey the vertical load directly from the baulk to the pile; and adequate provision to resist a horizontal shearing force away from the up line was made in the design of the pile head. The cause of this shearing force will be appreciated by reference to the illustration on page 100 showing the considerable drag on the hauling ropes between the engine and the top of the crane jibs at the commencement of rolling up. Fig. 1 illustrates these arrangements.

Double sleeping of the up main line extended throughout 120 ft. On the down main line the double sleeping extended throughout 180 ft. Tying of up and down main lines was arranged by the use of chaired sleepers interlaced at 7 ft. 6 in. centres, the total length involved being 570 ft.

#### Construction of Platform

The construction of the platform and its accessories under the engine was vital to the success of the whole operations, and great care and thought was given to its construction. It was to be made of sleepers, having upon it two bullhead rails laid flat to receive the wheel flanges of the engine; and it was essential to ensure as far as possible that the flanges actually located in the webs of these rails as it would not be possible to jack the wheels into them after rolling up owing to the soft, wet nature of the earth supporting the platform.

This was done by building the platform so that the webs of the rails were immediately below the flanges of the left-hand engine wheels to ensure their entering the web almost as soon as rolling up started and, therefore, arresting immediately any skid which might

take place. This necessitated the platform having four layers of sleepers laid in alternate directions. The joints of the rails were secured from moving by longitudinal staggered sleepers, all solidly dogged together, the whole platform being shored to the bank opposite the engine wheels. The rails laid flat

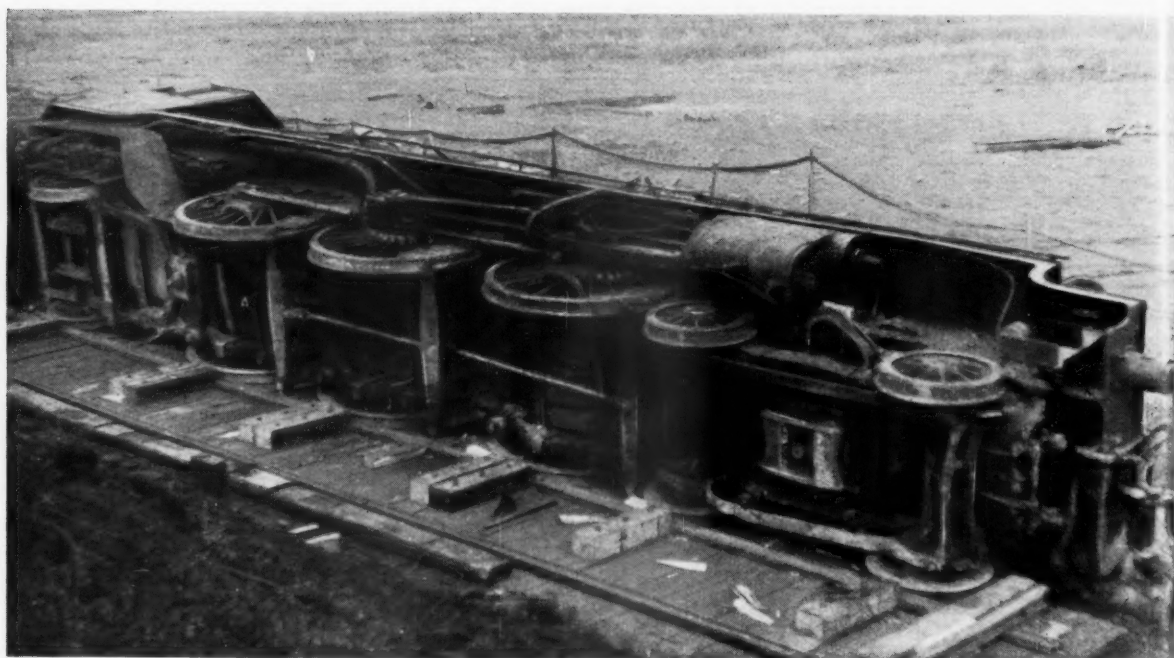
on the platform were secured by steel dog spikes, driven alongside to bind tightly on to the centre of the heads and feet of the rails.

As there was a possibility that, whilst the engine was at an acute angle (and bearing in mind the drag on it during the rolling up), the left-hand wheel flanges might mount the radius between the rail web and head and thus be forced off the rail altogether, hardwood blocks, two to each coupled and one to each bogie and bissel wheel, 9 ft. x 7 ft. x 3 ft. with a 1½ in. x 2½ in. rebate for the rail head were bolted to the top sleepers each with three 15 in. x 1 in. bolts.

To facilitate the rails being immediately under the left-hand wheel flanges, the platform had to be set at the same angle as that at which the engine lay, i.e., approximately 1 in 15 (the smokebox end being lower than the cab end). A scotch, therefore, had to be provided across the rails and immediately in front of the bogie wheels to prevent the engine running off the platform immediately the right-hand wheels landed and before scotches could be placed under the wheels. This was arranged by spiking a sleeper to the platform (an additional precaution was also provided which is described later).

As it was essential for the ramp track to have a 7-ch. curve from the platform onwards, some provision had to be made on the platform to check the side thrust of the bogie check springs forcing the flanges of these wheels out of the rail web when the three pairs of coupled wheels were on the curve of the ramp track. Sleepers were, therefore, arranged on the outside of the rail laid on the platform to receive the right-hand engine wheels. These sleepers were at such a distance from this rail as to be well clear of the wheel tyres should the flange miss the rail in rolling up, but sufficiently near to permit wood packing to be inserted between them and the outer face of the wheel tyres so guiding them on to the chaired track on the ramp.

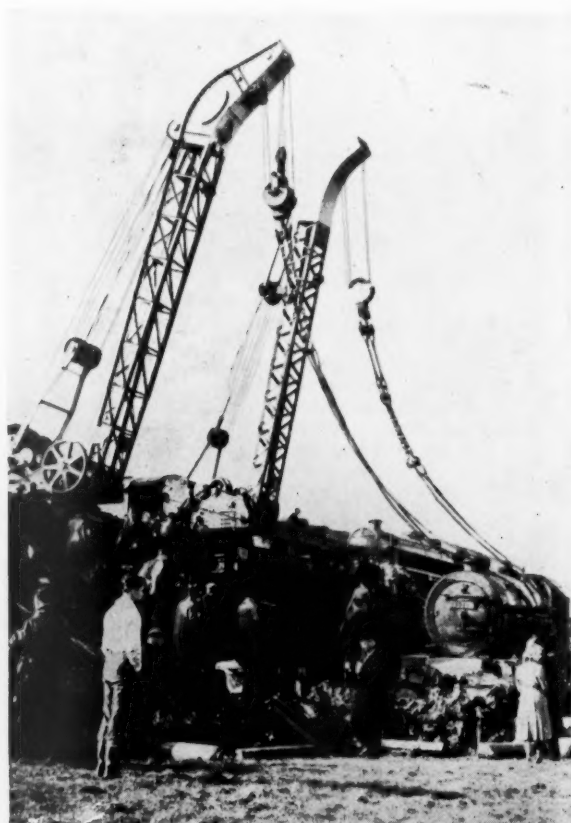
No special fitments were arranged on the platform provided for the tender to be uprighted on to, other than a sleeper



*Rerailing platform alongside the overturned locomotive in readiness for the rolling up operation illustrated below. The bull head rails laid flat on the platform were to receive the wheel flanges of the locomotive. Hardwood blocks prevented the left-hand flanges from being forced off the rail while the engine was being righted*



*Rolling up begins. Note drag on hauling ropes between engine and tops of cranes*



*The locomotive standing on the sleeper platform after completion of the rolling up operation*



Fig. 2 (left)—Details of construction of the sleeper platform and method of shoring it to the bank. The platform was at an angle corresponding to that at which the engine lay and a scotch was necessary to prevent the engine running off after being righted

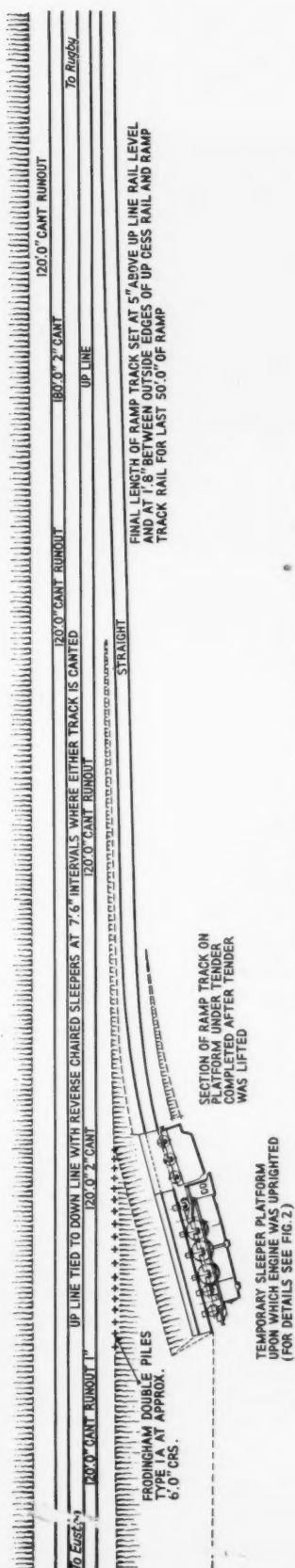
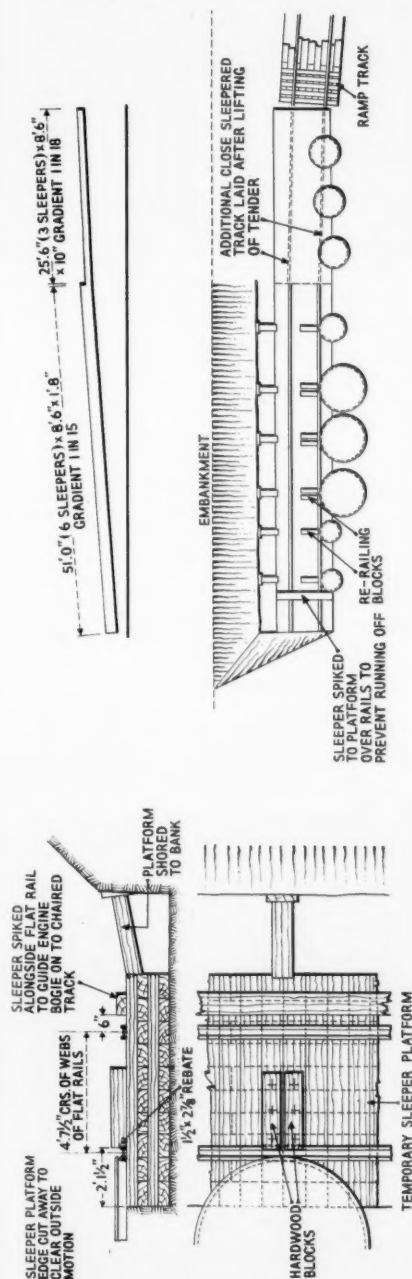


Fig. 3—Rerailing platform and ramp track in relation to the running lines

scotch to assist in preventing it running forward when rolled up, as the tender was to be lifted direct off the sleeper platform.

The engine platform was approximately 51 ft. long, 9 ft. wide and weighed over 10 tons (Fig. 2).

### Ramp Track

In order to bring the engine from the platform up to rail level and to a point well clear of the section of the embankment which had been disturbed by the original derailment and not more than 18 ft. from the centre line of the down main line (18 ft. being the maximum radius at which the two cranes could lift the engine) a ramped earthwork was cut out of the up side bank by a  $\frac{3}{4}$ -cu. yd. dragline navy and a "D.4" bulldozer. The navy was also used to carry the piling frames and drop hammer used in driving the piles.

This ramped earthwork was laid with chaired track, the sleepers being spaced at 1 ft. 6 in. centres, the first 200 ft. supported over the newly excavated ramp by a paving of sleepers 9 ft. wide.

The overall length of this ramp track (Fig. 3) from the platform was 440 ft.; the first 30 ft. coming off the platform having to be laid after the tender had been lifted, the last 50 ft. being 18 ft. from the centre of the down line. The general gradient of the ramp track was 1 in 22.

With the object of saving time on the day of operations, channels were cut in the earth underneath the engine and tender at the leading and trailing wheels (coupled in the case of the engine) through which the wire ropes required for rolling up could be threaded.

### Telegraph Pole Removed

Removal of the one telegraph pole did not create any complications as several of the poles had been demolished by the derailment itself and the "by passing" of this breakage in the wires was already arranged outside this particular pole.

Excavation, pile driving and construction of the platform were carried out by contract work. The strengthening of the up and down lines, the sleeper paving of the ramp and the laying in of the ramp track were carried out by the District Engineer's staff. The obtaining of contractors, the arrangements for the supply of material and the carrying out of all these preparations were performed very satisfactorily in the remarkably short time of three weeks.

No additional speed restrictions were necessary on the up main line, as a 15-m.p.h. restriction was already in operation due to the disturbance caused by the derailment, but it was necessary to put on a special 15-m.p.h. restriction on the down line owing to the provision of the 2-in. cant in a road which was normally without any cant. This cant was put on two or three days before rerailment took place; otherwise the running of trains was not interfered with by the carrying out of these works.

(To be continued)

## Fluorescent Lighting for Train Indicators

*Circuit developed by London Transport to avoid difficulties associated with frequent switching of lamps*



*One of three indicators with fluorescent lamps on the District Line platforms at Charing Cross Station, London Transport*

SEVERAL characteristics of the fluorescent lamp make it a suitable medium for lighting train destination indicators on platforms. Being an elongated light source of evenly distributed intensity, the signs are uniformly illuminated, while the efficiency in light output enables low wattages to be used. At the same time, however, if one of the conventional circuits were adopted, the frequent switching on and off in an indicator would reduce the long life that is another valuable feature of the lamps.

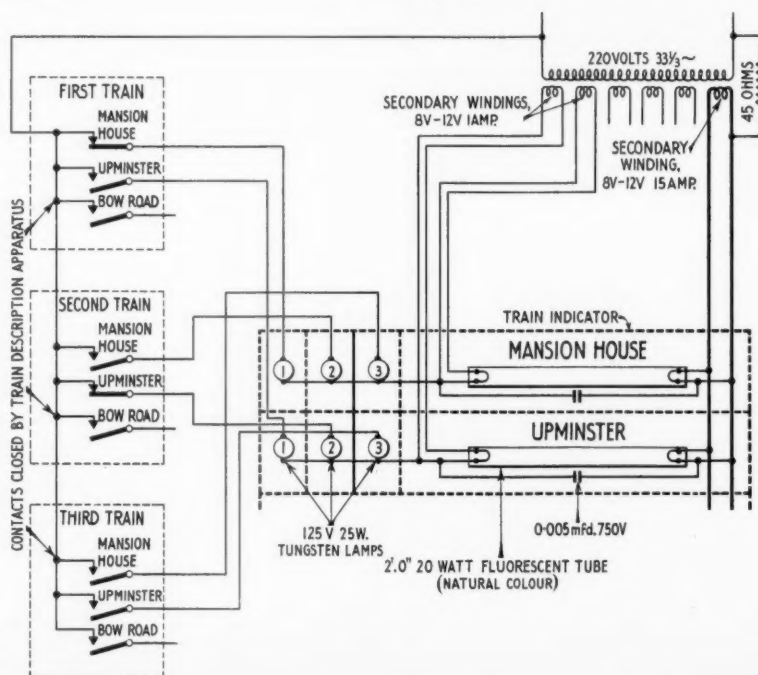
When it was decided to adopt fluorescent lighting in three indicators on the Circle Line platforms at Charing Cross Underground Station, the Signal Engineer's Department of the London Transport Executive devised a circuit that not only avoids switching the filaments, but utilises as part of the indicator lighting the resistive ballasts necessary to limit the fluorescent lamp current.

The circuit arrangement for two lamps in an indicator is shown in the accompanying diagram, from which it will be seen that both filaments are heated continuously from low-voltage secondary windings on a special transformer. The filament at one end of each lamp is across an individual 1A. winding, separation of these circuits being necessary for selective switching of the indications. All the other filaments are fed in common from a 15A. winding, the maximum number of displays in the Charing Cross indicators being fifteen.

### Tungsten Ballast Lamps

The resistive ballasts are provided by the three tungsten lamps associated with each destination sign to show the order in which trains will arrive. Even if the next three trains are for the same destination, so that three ballasts in parallel are in circuit, the decrease in brightness

of these tungsten lamps is barely noticeable, and in any case such circumstances are of rare occurrence. When any display is selected automatically by an approaching train or trains, the relays concerned switch in one or more of the ballast lamps and also connect the fluorescent lamp across the 220V. mains supply so that it strikes immediately, without even the fractional delay necessary in the ordinary instant start type of circuit for heating the filaments.



*Supply for filaments from secondaries of special transformer, and connections to mains through describer relays*

In the Charing Cross indicators the fluorescent lamps are of the 2 ft. 20W. size, so that no step-up of voltage is necessary to make them strike. Their colour is Natural to match the general fluorescent lighting in the station. The ballast lamps are 150V., 25W., and a tinted glass has been fitted in front of them to give a close match in colour with the fluorescent lighting of the destination.

### Construction of Indicators

The indicators themselves were designed and made by the Signal Engineer's Department. Special attention was given to avoiding angles that would attract dust and make cleaning awkward, the display panels being mounted in a metal framework, which itself has smooth outlines. The panels hinge upwards for relamping and are supported in the open position by struts. The transformer is mounted on top of the indicator, above the false ceiling. At Charing Cross and at most London Transport stations at present the supply frequency is 33½ cycles. It has been found that the increased tendency of fluorescent lamps to flicker on this sub-standard frequency can be counteracted by suitable choice of heater voltage, the transformers being designed to suit.

The use of fluorescent lamps in platform indicators might usefully be extended when new general illumination schemes with this type of light source are planned.

## RAILWAY NEWS SECTION

## PERSONAL

Mr. W. A. Hewitt, General Manager of the North Western Railway, Pakistan, has proceeded on leave preparatory to retirement from July 9. He is being succeeded by Mr. M. J. Chughtai, previously Chief Engineer of that Railway.

Mr. J. N. Das, M.Inst.T., Divisional Superintendent, Howrah, East Indian Rail-

and served in various capacities in the Operating and the Commercial Departments at headquarters. While at headquarters he was closely associated with many schemes for development of operational facilities on the East Indian Railway. During 1940-43 he served as Operating Officer in the coalfields, and was responsible for supervising and co-ordinating the movement of coal and military traffic. In 1947 he was entrusted with the

this month and is being succeeded by Mr. A. A. Brown, formerly of the Indian Railway Board.

Mr. A. G. H. Pritchett has been appointed General Sales Manager of Chamberlain Industries Limited.

Mr. J. S. Mathur, M.A., Traffic Manager, Oudh Tirhut Railway, India, who, as recorded in our May 23 issue, has been



*Mr. J. N. Das*

Appointed Chief Commercial Superintendent,  
Eastern Railway, India



*Mr. J. S. Mathur*

Appointed Chief Operating Superintendent,  
North Eastern Railway, India

way, who, as recorded in our May 23 issue, had been appointed Chief Commercial Superintendent, Eastern Railway, India, was born in 1898, and graduated with honours from the University of Calcutta in 1920. He proceeded to England, and during three years traffic training worked on the Furness, Lancashire & Yorkshire, L.N.W., and L.M.S. Railways. On his return to India Mr. Das joined the East Indian Railway in 1923 as Probationary Officer, but again proceeded to England in 1928 on study leave. He joined the London School of Economics, and headed the list of successful candidates in the University examination on Commercial Railway Economics. While on study leave, he also made some special studies on the Great Western Railway. Returning again to India, he was posted as Assistant Transportation Officer in the coalfields. Later Mr. Das was engaged for more than three years in the job analysis work set up by the Pope Committee. In 1938 he was promoted to district rank,

reorganisation work of the Claims Department of the E.I.R., and later in the year was appointed Divisional Superintendent, Allahabad, subsequently taking over as Divisional Superintendent, Howrah.

Mr. J. B. Figgins has announced his intention of retiring from the General Secretaryship of the National Union of Railwaymen on March 8, 1953.

The Queen has conferred the dignity of a Baronet of the United Kingdom on Geoffrey Summers of Shotton in the County of Flint, Esquire, C.B.E. Mr. Summers is a Director of John Summers & Sons Ltd.

General Ismail Safwat has been appointed Director-General of the Iraqi State Railways in succession to Mr. W. J. Moffatt, who has become Technical Inspector-General. Mr. G. H. Waumsley, Inspector-General of Traffic and Acting Traffic Manager, is resigning at the end of

appointed Chief Operating Superintendent, North Eastern Railway, India, was born in 1904. After taking his M.A. degree at Lahore University in 1926 he joined the East Indian Railway as a probationary in the Transportation & Commercial Department in 1927. In April, 1938, he was transferred to the Eastern Bengal Railway (later Bengal Assam Railway) and during the second world war was promoted to officiate as Divisional Superintendent, first occupying a position in this capacity at Lumding in 1943. He was transferred to Dacca in the same capacity in 1944 and towards the end of that year went to Chittagong as Deputy Transportation Manager. Between May, 1946, and March, 1947, he served as Joint Director, Movements, Ministry of Food, Government of India, and later was transferred to the Ministry of Transport and posted as Regional Controller of Railway Priorities, Calcutta. Mr. Mathur was appointed Divisional Transportation Superintendent on the Great Indian Peninsula Railway in





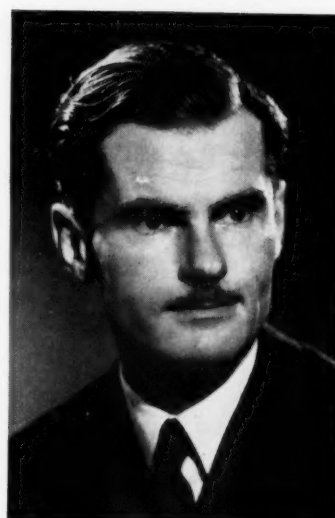
**Mr. J. R. Hammond**

Appointed District Engineer, Cardiff, Western Region



**Mr. F. H. Marshall**

London District Freight Superintendent, Southern Region, who has retired



**Mr. K. Brinsmead**

Appointed Assistant Engineer (Permanent Way), Eastern Region

September, 1948, and Traffic Manager of the Oudh Tirhut Railway in August, 1951. He was commissioned in the Defence of India Unit (Railways) in June, 1942, and held the rank of Lt.-Colonel when this unit was disbanded in 1945.

Mr. J. R. Hammond, M.B.E., B.Sc., A.M.I.C.E., Assistant District Engineer, Newport, Western Region, who, as recorded in our July 11 issue, has been appointed District Engineer, Cardiff, entered the service of the Great Western Railway as surveyor and draughtsman in October, 1937, having previously been a pupil of the company's Chief Engineer. After employment on new works schemes, and a period on loan to the Ministry of Aircraft Production, he returned to the Office of the Chief Engineer in February, 1941. He was Resident Engineer of several works carried out as war measures, until October, 1942, when he joined H.M. Forces. Whilst serving, he attained the rank of Major, was awarded the M.B.E. (Military Division), and mentioned in despatches during service in Italy. Mr. Hammond returned to the railway service in February, 1946, as Assistant in the Divisional Engineer's Office, Bristol, and was transferred to Neath as Assistant Divisional Engineer in 1947. In 1948 Mr. Hammond transferred to the Chief Engineer's Office at Paddington as Personal Assistant to the Chief Engineer, and three years later moved to Newport as Assistant District Engineer.

#### LONDON MIDLAND REGION STAFF CHANGES

The following staff changes are announced by the London Midland Region:—

Mr. G. S. Garbert, Passenger Assistant to District Commercial Superintendent, Barrow, to be Assistant District Commercial Superintendent, Barrow.

Mr. H. Shuffelbotham, Assistant District Goods Superintendent, Warrington, to be District Goods Superintendent, Warrington.

Mr. W. A. G. Suddaby, District Operating Superintendent, Fenchurch Street, Eastern Region, to be District Operating Superintendent, Manchester (ex E.R.)—(Eastern Area).

Mr. F. H. Marshall, M.B.E., London District Freight Superintendent, Southern Region, who has retired, served with the London & North Western Railway before joining the South Eastern & Chatham Railway in 1910. After holding the position of Chief Clerk to the London District Goods Superintendent, he went to Bricklayers Arms as Goods Agent in 1917. Mr. Marshall became Goods Agent, Nine Elms, in 1929, Assistant London District Freight Superintendent in 1942, and London District Freight Superintendent in 1947. He was made an M.B.E. in the King's Birthday Honours, 1944.

We regret to record the death, at the age of 70, of Mr. William Shearer, Chairman of Balfour, Beatty & Co. Ltd.

Mr. A. F. Kirby, Assistant Commissioner for Transport, East Africa, is at present on a visit to this country. He expects to return to East Africa on August 2.

We regret to record the death on July 12, at the age of 78, of Mr. R. H. Pitts, Chief Stores Superintendent, London Passenger Transport Board, 1933-39.

Commissioner Clyde B. Aitchison, who has retired from active duty with the Interstate Commerce Commission, had continued in office long after the normal age for retirement and, in fact, two years longer than the end of his official term, pending the nomination of a successor by President Truman. After distinguished service on the Oregon Railroad Commission he was appointed to the Interstate Commerce Commission by President Wilson in 1917, and in consequence he has a record of service unequalled in the history of the Commission. President Truman has pointed out that "few men in the entire history of our country have equalled your long record in the public service." An erudite student of British transport regulation, as befits one whose family came from Berwickshire, Clyde B. Aitchison can claim the distinction of having sat on one occasion with our own Railway Rates Tribunal.

Mr. K. Brinsmead, D.S.O., M.I.C.E., M.I.Mech.E., A.C.G.I., Assistant Civil Engineer (Permanent Way), London Transport Executive, who, as recorded in our July 11 issue, has been appointed Assistant Engineer (Permanent Way), Civil Engineer's Department, Eastern Region, British Railways, Kings Cross, was educated at Uppingham School and the City & Guilds Engineering College. He entered the service of the L.M.S.R. in 1924 and transferred to the L.N.E.R. in 1929. In 1935 he joined the London Passenger Transport Board as a technical assistant in the Office of the Permanent Way Engineer (Railways). From 1939 to 1945 he served with the Royal Engineers, becoming ultimately Liaison Officer to the Engineer School and Engineer Board of the U.S. Corps of Engineers, with the rank of Lt.-Colonel. For his war service he was awarded the D.S.O. and the Legion of Merit (U.S.A.) and mentioned in despatches. He rejoined London Transport in 1946 as Chief Assistant to the Permanent Way Engineer (Railways) and was appointed Permanent Way Engineer (Railways) in 1947. Mr. Brinsmead was appointed Assistant Civil Engineer (Permanent Way), London Transport, in 1951.

We regret to record the death of Dr. Charles J. O'Reilly, M.D., Chief Medical Officer, Coras Iompair Eireann.

British Railways, Western Region, announce the appointment of Mr. F. L. Lambert, District Engineer, Shrewsbury, as District Engineer, Newport.

We regret to record the death in Buenos Aires of Mr. John Brown, formerly Architect of the Central Argentine Railway.

The University of Wales has conferred the degree of Doctor of Science *honoris causa* on Mr. Ivor Richard Cox, in recognition of his outstanding services to the electrical industry. Mr. Cox is Managing Director, Metropolitan-Vickers Electrical Co. Ltd.; Deputy Chairman, Metropolitan-Vickers Electrical Export Co. Ltd.; and a Director of Associated Electrical Industries Limited, the British Thomson-Houston Co. Ltd., Metropolitan-Vickers-GRS. Limited, and Sunvic Controls Limited.

## Transport Inquiry in Northern Ireland

*Evidence given at final sittings—Statements by Messrs. F. A. Pope, G. Howden, and J. A. Clarke*

The Northern Ireland Transport Tribunal resumed its inquiry into the working of the Ulster Transport Authority on June 3. Evidence given at previous sittings has been summarised in our issues of May 2 and June 13.

Mr. Samuel Napier, Secretary of the Northern Ireland Labour Party, praised the work which the Ulster Transport Authority had done but recommended a change in the constitution of its Board. He and the Irish Secretary of the Transport Salaried Staffs Association suggested that the Belfast transport undertaking should be merged with that of the U.T.A. and that the arrangement whereby the U.T.A. handed over to Londonderry Corporation half its profits on bus services within the city should cease. He considered most undesirable the proposed transfer of the Stranraer service from Larne to Belfast.

Mr. W. M. May, M.P., urged the Tribunal to find that all railway services in Northern Ireland should be discontinued. If lines had to be kept open for strategic reasons the cost should be met out of public funds. It was incredible that the Government should consider taking over from the G.N.R.(I.) a problematical asset which would place a still further burden on the shoulders of the U.T.A. Mr. B. Faulkner, M.P., on the other hand, suggested the reduction in the loss on road freight services (£162,429 in 1950 and £27,913 in 1951) was due to some extent to the transfer of freight haulage from road to rail. Not enough had been done to attract traffic to the railways. There were no day or half-day excursions to seaside resorts, he said. Diesel railcars should have been tried on the closed County Down lines. A firm of engineering experts should investigate the Duncrue Street workshops where, he thought, expenditure could be reduced considerably.

### Loan to U.T.A.

The Tribunal was informed by Mr. D. H. Duncan, Chief Accountant, U.T.A., that the Authority had borrowed £7,000,000 from the Ministry. The loan was repayable over 65 years and bore interest at 3 per cent., plus  $\frac{1}{2}$  for capital redemption. The borrowings were required mainly to meet the acquisition price of the constituent undertakings—the former Northern Ireland Road Transport Board, £3,025,000; Belfast & County Down Railway, £486,000; N.C.C. £2,768,000. The balance of the sum was applied in meeting loan interest and principal (£116,000) and in financing additional capital assets such as Duncrue Street workshops (£605,000). The Ministry, in August, 1949, cancelled £1,500,000 of those borrowings, leaving a total of £5,500,000 repayable. The Authority had so far repaid £123,000 of the principal sum so that the amount now outstanding was £5,377,000.

Colonel R. McCreary, General Manager of Belfast Corporation Transport Department until he retired last year, suggested that the use of the Belfast Central Railway as a link between the Belfast-Bangor line and points in the city, and the establishment of halts between Ballymacarrett junction and the Great Northern Railway terminus should be considered.

Sir Basil M'Farland, Chairman, Londonderry & Lough Swilly Railway Company, did not see how it would be possible to

make the Northern Counties line pay. Railway systems in Ireland never really paid, he added. Mr. F. A. Reid, for Bangor Borough Council, thought that local bus services should be directed to feed the railways and to teach the new population in those areas to become train-minded. Publicity and propaganda were other ways to get the public to use the trains more. The U.T.A. had not gone as far as it might in co-ordinating road and rail traffic.

The British Transport Commission, said Mr. R. Paterson, Irish Traffic Superintendent, British Railways, London Midland, Scottish, and Western Regions, had approved in principle a scheme for reorganising its services between England, Scotland and Northern Ireland; no action would be taken until the reaction of every organisation concerned had been obtained. He indicated that the *Princess Victoria* would sail daily, except Sunday, between Larne and Stranraer; an additional cargo vessel would run three times weekly from Stranraer to Donegall Quay, Belfast, instead of Larne.

Mr. J. A. Clarke, General Manager, Ulster Transport Authority, recommended that accrued losses of the Authority up to September 30, 1952, should be liquidated by the Government and that losses incurred subsequently should be liquidated annually until the Authority could operate on a self-supporting basis. The future of Ulster transport could not be considered without reference to Belfast Corporation Transport. The Transport Act had made provision for merger of the two bodies by agreement, subject to ministerial approval.

It was reasonable to hope, said Mr. A. Morrison, Chief Officer (Special Duties), U.T.A., that the Authority's road freight business would be self-supporting at the end of this financial year. Road freight services lost £7,265, and road passenger services £77,405, from the end of September, 1951, to the end of May, 1952. Railway services lost £312,830 in the period, compared with £249,641 last year.

Mr. F. A. Pope, Member, British Transport Commission, and formerly Chairman, Ulster Transport Authority, defended the policy of the U.T.A. in building Duncrue Street works and acquiring central office premises in Belfast. The N.C.C. shops, he said, had been destroyed and those of the B.C.D.R., which were inadequate, had been damaged. The headquarters had to be situated where they could keep in close touch with those in trade and industry. Mr. Pope objected strongly to subsidies, and said that it would be retrograde to hand over the freight service to be operated privately. He considered that a system of running railcars into Belfast was "a very good point" depending on co-operation with Belfast Transport. He was in favour of the Tribunal, to relieve constant criticism of the U.T.A., having an inquiry in January each year to show what the U.T.A. had done and what it proposed to do in the following year.

Mr. G. Howden, General Manager, Great Northern Railway (Ireland) and Coras Iompair Eireann, stated that by the adoption of diesel traction the whole character of railway working in Ireland would be radically changed for the better. Steam traction in the light of present-day conditions in Ireland and the cost of coal was neither desirable nor economic. Had

the G.N.R.(I.) adopted diesel traction entirely in 1951 alone, the saving would have been over £500,000. There would always be in transport matters, as in others, a section of the public which expected more than it was entitled to or was prepared to pay for on an economic basis. The problem so far as the railways were concerned was not one of proper working, management, or control, but simply a sheer inability to get the public to pay rates and fares to the railways commensurate with the cost of giving its services.

Mr. Howden said that any facile assumption that the railways had served their day and usefulness and that they should therefore be given a more or less speedy death, or at least suffer large-scale amputations, was neither desirable nor necessary.

### Submissions of U.T.A. Counsel

The inquiry, which opened on March 12, closed on July 9, after 39 public sittings. Mr. F. A. L. Harrison, Q.C., closing for the Authority, made the following submissions:—

Under present conditions the continued railway losses must be faced.

The new and "realistic" rates and fares structure offers hope that road passenger and freight undertakings have taken the shock of taxation and rising costs, and may "break even" this year.

The hotels position shows an improvement of £22,000 on the first eight months of the current financial year. It looks as though the deficit on the hotels this year may be between £5,000 and £7,000.

The accumulated losses are not the result of errors of management, but of economic forces not thought of in 1948 and outside the control of the Authority.

These accumulated losses must be dealt with by the Government on a realistic basis.

Until transport conditions in Northern Ireland become stabilised and the railway problem is under control, the cost of carrying the railways should be borne wholly or partly by the Exchequer.

Liability by payment of interest and capital redemption charges should be viewed contemporaneously with the problem of financing railway working.

If the Tribunal thinks there has been unfair or untrue criticism of loss of public money by extravagance, it would be of the greatest help to the morale of the officials of the Authority if the Tribunal is prepared to say so.

Mr. Harrison said that the inquiry had given the Authority opportunity of answering the unfair and widespread criticism launched against it. All ranks of the Authority felt that they had been unfairly judged because it was not appreciated by the public that the Authority had been set an impossible task financially, with no chance of making the 1948 Act work.

Much had been said about transferring passengers from road to rail. If the public preferred the bus, and if the average journey was sixpence, should the U.T.A. withdraw bus services to help railway revenue? It might result in the loss of traffic to both road and rail. There was no guarantee that it would get the traffic on the rail.

Rail freight had held its position but had not improved. It had been the victim of private enterprise in pre-war days, and it was now said that it was the victim of the Authority. It was not due to the 800

vehicles of the U.T.A., but to the 20,000 privately-owned goods vehicles that were in Northern Ireland and the 19,000 tractors. To allow private enterprise to take over the road freight service would risk a return to the conditions of 1935, condemned time and again.

Some method, he submitted, would have to be found of relieving the Authority of the burden of interest and capital repayments. Some means would have to be found, too, to protect it from unreasonable tax demands.

"It may be that an answer lies partly in providing relief from the interest on capital repayments, or relief from the burden of taxation," said Mr. Harrison. "Parliament alone can provide the resources to give the public the service it needs, which the Authority is anxious to provide, and which it cannot provide because it is hamstrung by the financial provisions of the 1948 Act."

## Staff & Labour Matters

### Western Region Shed Dispute

After a delegate meeting of Western Region locomotive shed men at Bristol on July 17 the men's representatives recommended a return to normal working (piece-work) from 6 a.m. on July 21. Mr. R. J. Trevass, a member of the N.U.R. Executive, informed the men of talks between representatives of the N.U.R. and the Railway Executive, and urged them to revert to normal working. At these talks it was stated that if the men desired, their pay grievances could be submitted to independent arbitration.

### Statement by Railway Executive

The following statement was issued by the Railway Executive on July 18:—

"After their meeting on July 17, the unofficial delegates representing some of the locomotive shed staff in the Western Region are reported to have issued a statement that they would resume normal working on July 21, 'in order to allow members of the Railways Staff Conference, whose meeting is to be held on Friday, July 25, to consider the claim of the pieceworkers arising from the court of inquiry findings in 1947, and also decision No. 13 of the railway staffs tribunal. In the event of an unacceptable decision at the Railway staff conference a recall conference of the men will be held to consider what further action be taken.'

"In order to remove any misunderstanding, the Railway Executive wishes to make it clear that the meeting between the Railways Staff Conference and the N.U.R. on July 25 was arranged some time before the recent unofficial labour dispute in the Western Region, as part of a series of discussions on the consolidation of war bonus into rates of pay and the consequent effect upon bonus schemes generally. The dispute in the Western Region is, therefore, irrelevant to this meeting. British Railways (Western Region) have already made clear in their statement of July 14 that the National Wages Awards in question do not involve adjustments in piece-work, tonnage or bonus payments. These awards were accepted by the trade unions and have been fully implemented by the railways."

### Return to Normal Working

On July 19, locomotive shed staff at Old Oak Common Depot returned to normal working, and on July 21 the position at all the depots on the Western Region which

had been concerned in the labour difficulties was normal.

### Minister of Labour and Pay Claims

The Minister of Labour & National Service, Sir Walter Monckton, has referred back wages proposals submitted to him for approval by wages councils representing a number of trades, including the retail food, retail drapery, outfitting and footwear, and retail furnishing and allied trades.

The negotiations leading up to the proposals arose from a claim from the Union of Shop, Distributive & Allied Workers for an increase of £1 a week. The increases eventually recommended had been based on the rise in the cost-of-living index, and included 10s. a week for men and 7s. 6d. for women in the drapery trade and the food trades and 9s. for men and 7s. 6d. for women in the furnishing trades.

In referring back the proposals, the Minister commented that the present economic circumstances are such that proposals for wages increases must be considered with full regard to the national interest, and that the proposals should accordingly be considered in the light of that statement.

The T.U.C. economic committee on July 22 discussed the action of the Minister of Labour in referring back the proposals, and decided to bring the matter before the meeting of the General Council on July 23.

### Busmen's Wages

At a meeting of the National Council for the Omnibus Industry in London on July 16, the claim of the trade unions for a substantial increase in wages and improvements in holiday conditions was further considered. The unions being unwilling to withdraw their claim, it was referred to arbitration in accordance with the constitution of the council. The claim affects some 100,000 persons employed by private bus companies and undertakings controlled by the B.T.C.

## Parliamentary Notes

### British Transport Commission Bill

The British Transport Commission Bill was read the third time, with the amendments, and passed in the House of Lords on July 17. The Lords' amendments were considered by the House of Commons on July 21 and agreed to.

### Transport Act Amendment Bill

The Transport Act (1947) Amendment Bill, designed to facilitate use of railway workshops for rearmament and sub-contract work, was given a second reading in the House of Commons on July 18, and committed to a Standing Committee.

### South African Railway Equipment

Mr. Cyril Osborne (Louth—C.) in the House of Commons on July 10 drew attention to the delayed deliveries of railway equipment to the South African Railways mentioned by Mr. Sauer, South African Minister of Transport, and the subject of editorial comment in our issue of June 27 and pointed out that some orders had been cancelled. Mr. Osborne asked the President of the Board of Trade to make representations to the South African Government to see if the cancelled orders could not be retained if delivery were guaranteed.

Mr. Peter Thorneycroft, President of the Board of Trade, said he did not know orders had been cancelled. The Minister of Supply, he stated, was looking into the cause of delay to see what could be done to improve matters.

In reply to questions, Mr. Thorneycroft said that delays had in fact taken place. He could not say whether rearmament had contributed. As to the accuracy of Mr. Sauer's statement, they had only just received details and were looking into it as a matter of urgency.

### Passenger Fares

In reply to questions in the House of Commons on passenger fares Mr. Alan Lennox-Boyd, Minister of Transport, stated on July 14 that the Government decision on fares was confined entirely to preventing hardships due to disproportionate increases in certain sub-standard fares. It was not based on any assessment by him as to what would be the net revenues, after appropriate deductions for central charges, from fares in the London Area, or from railway fares outside, or from railway freight charges.

### Contribution to Central Charges

Questioned about his statement on a previous occasion that passenger traffic was being carried on the back of freight transport, Mr. Lennox-Boyd said that he had ascertained from the B.T.C. that, outside London, passenger fares met the cost and left about £7½ million to meet general expenses, but that those general expenses came to about £70 million. They could not be allocated precisely, but the Commission was satisfied it was substantially less than passenger fares might otherwise charge. Inside London, passenger fares contributed some £6 million less than central charges cost. The B.T.C. report showed a general improvement everywhere except in the London Transport area. All the important carrying activities except London Transport were making, or were coming near to making, a reasonable contribution to central charges.

## Questions in Parliament

### Railway Pensions

Mr. J. T. Price (Westhoughton-Lab.) on July 15 asked the Chancellor of the Exchequer whether he proposed to introduce any measure similar to the Pensions (Increase) Bill for the benefit of railway and other workers and retired servants of nationalised industries.

Mr. R. A. Butler wrote in reply: No.

Sir Geoffrey Hutchinson (North Ilford—C.) on July 15 asked the Minister of Transport whether it was now proposed to make any increase in the superannuation allowances to pensioned railwaymen.

Mr. Alan Lennox-Boyd wrote in reply: After the debate on the adjournment on June 19, the B.T.C. is examining the circumstances to which attention was drawn in the debate.

### Freight Charges in Northern Scotland

Mr. J. Grimond (Orkney and Shetland—Lib.) on July 14 asked the Minister of Transport, if he would introduce legislation this session to reduce and equalise freight charges in the North of Scotland.

Mr. A. T. Lennox-Boyd replied in the negative and added that it was not the intention of the Government to introduce legislative proposals this session on transport charges other than those contained in the Transport Bill.



## Debate on B.T.C. Report for 1951

### Minister of Transport on "impossible task" of integration

Opening the debate in the House of Commons on July 22 on the British Transport Commission Report for 1952, Mr. Alfred Barnes (East Ham South—Lab.), Minister of Transport in the last Labour Government, moved: "That this House notes with approval the fourth annual report of the British Transport Commission as marking a further stage in providing an efficient public transport system through the integration of road and rail traffic under common ownership."

He said that on previous occasions the Minister of Transport had accepted the responsibility for moving the acceptance of the B.T.C. annual report. They all recognised that the present Minister of Transport was not there to support the Commission but to destroy it if he had the opportunity.

The Government amendment to his motion, Mr. Barnes pointed out, stated that: "This House, while recognising the efforts of the British Transport Commission and the Executives believes that they were entrusted by the Transport Act of 1947 with an impossible task, the attempt to discharge which has seriously impeded the interchange of goods and services throughout Great Britain."

There was no evidence to support that contention, Mr. Barnes continued. The Road Haulage Executive had been faced with the greatest rationalisation process that any industry in this country had ever had to undertake, and in three years had acquired 3,766 undertakings and moulded them into a national network. The quality and standard of the Road Haulage Executive fleet was higher than it was under private enterprise.

#### Commission's Working Surplus

The Commission had had a working surplus of £165 million in four years. Any group of business companies which had such a surplus would not be described as making a loss. Of the deficiency of £40 million, £13,500,000 was capital redemption charge, and was in no way an irreparable loss.

A deficiency of £26 million on a turnover of £2,200 million, Mr. Barnes said, after paying interest of £40 million a year, did not represent a transport problem that was difficult of solution. If the House would give the Commission the support it needed and deserved, the problem could easily be overcome.

In the 1951 report the Commission had balanced its accounts. Immediately it did so the Government started on a deliberate policy to unbalance them. Since Easter the Government had taken a series of decisions which could have no other purpose. There was no case for the amendment.

Mr. A. T. Lennox-Boyd, Minister of Transport, moving the Government amendment, paid a tribute to the Members of the Commission and Executives, and praised the integrity, courage, and independence of mind of Lord Hurcomb.

He admitted that the drastic transformation of the 1947 Act was necessary. The B.T.C. had produced a good and well-written report, "perhaps with a shade more autobiography than history," but he did not protest if here and there it was clear that it had been written with the Transport Bill, 1952, in mind.

Answering the suggestion that the

Government set out deliberately to unbalance the Commission accounts, he said he did not doubt that if Mr. Barnes had been responsible he would have taken exactly the same action on the fare increases as the Government took.

If Mr. Barnes could say that the Labour party would have left the disproportionate charges which were imposed on the people of London and outside without any use of the Minister's powers of direction, that hardly squared with the consistent questioning to which Ministers were subjected while the review was taking place.

Since the publication of the White Paper on transport, said Mr. Lennox-Boyd, there had been considerable consultation between himself, his colleagues, and the Commission. He hoped there would be opportunities at an early date, for such of those activities as would remain part of the nationalised or centralised Commission, to put money on one side for replacement.

#### Standardisation

The Government welcomed the closing of redundant branch lines, and a saving of some £900,000 a year might be achieved from this, and also central purchases where they led to definite economies. There had been certain good results from standardisation, though British locomotives, for example, used to provide a fruitful field in individual designs which had repercussions all over the world, and standardisation could be carried so far that that desirable opening might be dried up.

#### Failure of Integration

The achievements of the Transport Commission in its annual report were achievements of separate transport activities. That was the crux of the whole matter. The purpose of the 1947 Act was to integrate all transport activities, and improvements in separate transport services, however desirable, were no answer. The absolute failure in integration, despite all the effort put into it, justified a new approach.

The test of an efficient organisation was not so much how much it carried, as whether it carried goods in the swiftest and cheapest way to suit the needs of trade and industry and the travelling public. On that test, the 1947 Act had undoubtedly failed. All the difficulties the Act was meant to solve remained, unless by integration the Opposition meant absorption of one section of the transport system in another. That was to make some blueprint the master of the whole community.

The report of the Road Haulage Committee showed there was a plan in the Road Haulage Executive to break up its fleet into eight geographical divisions controlling 50 districts mainly as self-contained trading entities. They themselves had been driven to the conclusion that a large monopoly was unsuited to the road haulage needs of the country. It would have been quite impossible for any Government to have viewed such a situation and taken no action.

#### Consultations on Transport Policy

Mr. Lennox-Boyd said he would be glad to discuss the problems of the Bill with the trade unions. He was ready to discuss it with them before the Bill was published, but they decided otherwise. He would also discuss the Bill with the Railway Executive, the Transport Commission, and all engaged in transport. As the Government

intended to be in power for a long time they intended to carry through a Bill that would work efficiently.

#### Government Intentions

Those who wished to retain the road haulage monopoly in public hands, Mr. Lennox-Boyd continued, would never be satisfied; those who wished permanently to shackle "A" and "B" licensees with a 25-mile limit would never be satisfied—nor would those who wished to hold up road transport to theory. The broad structure of the new Bill represented the Government intentions, but he would listen to any advice that might come from those who wished to see the Bill work and realised that the present situation could not be tolerated indefinitely.

Transport could play an effective part in bringing the economic crisis under control, but it must be decentralised by private enterprise and competition. The traveller and trader should choose the form of transport they wished, but should pay for the cost of any transport services preserved in their own interests. He hoped to contribute towards equalising the burden and improving the competitive position between railways and roads. That could not be achieved by putting more burden on the roads. They could help the railways in their capital requirements and hoped to improve their competitive position in other ways.

#### Railway Road Haulage Undertakings

The Commission would be entitled to retain for the use of the nationalised undertaking a fleet of road vehicles approximate to that owned by the four railway companies in 1947. That would give the railways a chance for wider earning possibilities and provide a comparison between the smaller denationalised units of the B.T.C.

The decentralisation of the railways would be widely welcomed in many informed railway circles. The Government looked forward to the publication of the scheme and would do what they could to make it work.

#### Future of Executives

He had done his best, Mr. Lennox-Boyd went on, to give a certain amount of temporary security to those who were working hard for the Commission and Executives.

The members of the Railway Executive would be absorbed into the new structure if they wished to be, and the Road Haulage Executive would come to an end with its activities. As to the Road, Docks & Harbours, and Hotels Executives, for the eventual form their activities would take they must await publication of the actual scheme. The London Transport Executive would be retained, though not exactly in its present form or name. All working on the roads and railways could be assured that this Government would be as ready as the Labour Government to see that the compensation clauses of their Bill were scrupulously enacted.

Mr. L. J. Callaghan (S.E. Cardiff—Lab.) said the Minister had thrown overboard the idea of integrating road and rail services. There was no evidence for saying that the Chairman of the B.T.C. did not know what he was talking about when he said that integration was on the verge of coming into existence and that large-scale economies would eventually result. The

Minister was destroying the idea of integration by proposing to sell back the road haulage units, and they would be back in precisely the same position as they were in the 1930's, which led the Salter Commission to say that nationalisation of the railways alone, leaving other forms of transport in other hands, would not produce any real co-ordination of transport.

Fare increases, Mr. Callaghan added, would have been much higher had it not been for the increased efficiency and economy with which London Transport and British Railways had operated during the first four years of nationalisation.

Mr. Gurney Braithwaite, Parliamentary Secretary, Ministry of Transport, said the theme from the Government benches during the debate had been of over-centralisation, which had a frustrating effect. Railwaymen took a far greater pride as part of the team which called itself "G.W.R." than in the strange initials "B.R.(W.)" which were open to misinterpretations and misunderstanding. Outside Euston Station there was a poster, the caption to which read "Burnham-on-Sea. The favourite family resort. Travel by train." The B.T.C., however, had closed the railway station there on October 27 last. The Commission must have been obsessed by the dictum of Robert Louis Stevenson that it was better to travel hopefully than to arrive.

The B.T.C. report for 1951, he added, was a tribute to the enthusiasm and energy of the staff of the Commission, to which enthusiasm and energy would presently be added greater freedom and flexibility.

A Government amendment to delete the substance of the Opposition motion was carried by 293 to 270, and the Government then carried by 293 to 263 the amendment moved earlier by Mr. Lennox-Boyd. The amended motion was then approved without a division.

## Brazilian Rail Reorganisation

President Vargas has submitted a Bill to the Brazilian Congress to convert the Federal Railways into joint stock companies and create a co-ordinating body called Rede Ferroviária Federal S.A. The project represents the first step in the proposed reform of the State's industrial activities, now organised as autonomous institutions or public departments, so as to place the administrations on a business footing.

The capital of the joint stock companies would be formed by the value of their properties and rights, as fixed by a special commission, and that of the co-ordinating body by incorporation of the shares of the joint stock companies and by subscriptions from the Federal Treasury. The duties of the co-ordinating body would be to systematise the administrative organisation and operation methods of the railroads, fix tariffs, approve estimates, and reorganise staffs. It would market shares, finance the companies under its control, and draw up programmes of work.

The administration of the co-ordinating body of the joint stock companies would be exercised by administrative councils, that of the former being presided over by the Minister of Communications.

The project specifies the purposes to which profits may be applied and provides that uneconomic services performed in the public interest shall be subsidised by the Union. Provisionally the Executive will guarantee a minimum dividend of 5 per cent. per annum on shares held by the public.

The project has been well received by the press and engineering circles and by members of the Chamber, although it has not yet come up for plenary debate. It ensures the flexibility essential to an

industrial enterprise, whereas administrations are hampered by innumerable regulations under the present system, and makes the Federal Railways depend on their receipts, instead of upon budgetary credits as at present.

In discussing the project before the Engineers' Club, the Superintendent of the Central of Brazil Railway stated that the mentality created by this bureaucratic regimen is highly prejudicial to the economic development of the railways. He said that the total expenditure on twelve federal railways amounts to £9,358,760 annually, against receipts of £2,671,020.

## Cattle Accidents in India

Before the war, most lines in India had a form of token fencing, though the annual maintenance costs were high as a result of the theft of wire. The difficulty of obtaining wire during the war caused renewals to fall into arrears until a decision was taken to discontinue fencing. The material was removed and used elsewhere. This has led to an increase in animals straying on to the line, although even before the war they attempted to do so, and the heavier animals in fact broke through the wires.

Derailments caused by running over cows and buffaloes are usually limited to metre- and narrow-gauge lines. Occasionally broad-gauge trains are derailed by cattle and a particularly destructive derailment occurred on the broad-gauge section of the Western Railway on April 9. At 9.35 a.m. that day an up goods train was approaching Bilimora Station at about 15 m.p.h. It was hauled by "H" class 4-6-0 locomotive No. 508. A buffalo cross-

## Royal Visit to Newton Abbot



The Queen at Newton Abbot Station on July 2, when she visited the Royal Show. She is accompanied by Mr. K. W. C. Grand, Chief Regional Officer, Western Region, who met her on arrival by train



Leaving Newton Abbot Station, which was decorated for the visit. The Queen made the journey to Newton Abbot by rail from Paddington and returned similarly after her visit to the Royal Show

ing the line near the up home signals was run down and killed by this train. The engine escaped derailment but the animal's body became entangled under the leading wagons, of which five were derailed and six overturned. The wagons were dragged some 500 ft. before the train stopped. There was considerable damage to the permanent way, signalling equipment and an adjacent level crossing. The lines were blocked for about twelve hours.

### Contracts & Tenders

The Government of Pakistan has recently placed the following contracts:—

S. A. Ansaldo, Genoa-Cornigliano, Italy: Seven broad-gauge "BWL" bogie well wagons.

Metropolitan-Cammell Carriage & Wagon Co. Ltd.: 54 broad-gauge high-side four-wheel open wagons, type "OH"; 100 broad-gauge low-side four-wheel open wagons, type "OM"; 536 broad-gauge high-side four-wheel open wagons, type "O."

C. M. Hill & Co. (Engineers) Ltd., London, E.C.3, has received an order on behalf of its principals, S.A. des Ateliers de Construction de Familleureux, Belgium, for 50 bogie steel covered goods wagons of 35-ton capacity and 20 bogie cattle wagons, for the Benguela Railway, Portuguese West Africa.

Schindler Wagon A.G., Pratteln, Switzerland, is building 27 coaches for the National Railways of Mexico. The coaches are for the "Aztec Eagle" streamline service.

The Hunslet Engine Co. Ltd. has received from the National Coal Board an order for 37 six-coupled steam tank locomotives of the Austerly type, with 18 in. by 26 in. cylinders, 51-in. wheels, 170 lb. per sq. in. boiler pressure, 23,800 lb. tractive effort, and of 48½ tons weight. This order will cover most of the Board's requirements for the heaviest class of steam shunting locomotive over the next five years; and as something like a hundred are already in traffic in most of the Board's Divisions, it appears as if the N.C.B. has standardised this type in the largest size. This latest order is additional to 12 locomotives of the same class for the N.C.B. already in hand at the Hunslet Engine Works.

The London Midland Region of British Railways has placed an order with Ferguson Bros. (Port Glasgow) Ltd. for a single-screw diesel-engine hopper barge for use at Heysham. Delivery is anticipated by about the end of 1954.

The Board of Trade, Special Register Information Service, has recently reported a call for tenders issued by the Toronto Transportation Commission for the supply of 7,500 insulator chairs for conductor rails, type "A," and 1,800 insulator chairs for conductor rails, type "B." The type "A" insulator chairs are with integral protection board support for main-line track on concrete slab, or wood sleepers, and the type "B" are with separate protection board support for permanent way in yards on wood sleepers.

Tenders should reach the Chairman of Toronto Transportation Commission, Toronto, by 10 a.m., Eastern Standard Time, on August 14. A copy of the tender documents, including specification and drawings, is available for inspection at the Board of Trade, Commercial Relations & Exports Department, by representatives

of United Kingdom manufacturers. A further copy is available on loan in order of written application; reference CRE/24317/52 should be quoted.

The United Kingdom Senior Trade Commissioner at Karachi has notified the Board of Trade, Commercial Relations & Exports Department, of a call for tenders issued by the Department of Supply & Development, Government of Pakistan, for the supply of various spare parts for rolling stock. These spare parts include substantial quantities of various types of springs, parts for buffer assemblies and parts for axle-guards.

Tenders should reach the Director General of Supply & Development, Karachi, by September 4. A copy of the tender documents is available, for inspection at the Board of Trade by representatives of United Kingdom manufacturers until August 9, after which date it will be available on loan in order of written application; reference CRE/25159/52 should be quoted.

### Notes and News

#### Assistant Establishment Officer Required.

—The Government of Nigeria requires an Assistant Establishment Officer for the Railway Department for one tour of 18-24 months, with prospects of permanency. See Official Notices on page 111.

#### Barsi Light Railway Co. Ltd.

—The Directors of the Barsi Light Railway Co. Ltd. have declared a dividend of 2 per cent., actual, in respect of the half-year ended September 30, 1951, on the ordinary stock, payable on May 29, 1952, less income tax at 9s. 6d.

#### L.M.R. August Holiday Services.

—The London Midland Region is to run 1,078 extra main-line trains for the August Bank holiday period (July 31 to August 6) in an effort to provide easy and comfortable journeys with seats for all during the biggest holiday rush of the year. A special feature of the programme will be more day and half-day excursion trips to popular holiday centres. There will be 77 extra main-line trains from Euston and 58 from St. Pancras to the Midlands, the North and Scotland; while into London there will be 92 extra trains arriving at Euston and 57 at St. Pancras.

#### British-Argentine Railway Companies Agreement.

—The liquidators of the British-Argentine railway companies have announced that the Agreement recently concluded with the Argentine Ministry of Transport for a global settlement of all questions outstanding with the Argentine Government, has been ratified by the Argentine Executive Power. The liquidators point out that the carrying out in detail of the terms of the settlement will take some time and a number of lawsuits and claims by and against private individuals still remain to be settled. Everything possible is being done to complete outstanding matters with the least delay.

#### Message from Mr. D. Gordon to C.N.R. Staff.

—On being informed that Royal Assent had been given to the Canadian National Railways Capital Revisions Act, Mr. Donald Gordon, Chairman and President, C.N.R., sent a message to all staff in which he said that they had now a fair chance to show the results of each year's operations in the financial statement in a way that all could understand them. There

was no longer the burden of ancient debts incurred before the Canadian National System came into being. There lay on them more than ever a challenge to produce the best results. Although they had been given much-needed relief, at the same time they had been put "on the spot." He concluded with the words: "I am sure that, if we all work together, trying to get as much business as we can to operate as efficiently as we can, we will prove beyond doubt that there are no better railroaders anywhere. Go to it."

**Offers Sought for Cuban Railway.**—The Cuban cabinet has decided to call for bids for the purchase of the British-owned United Railways of the Havana. In 1949 the Cuban Government appointed an interventor with full power of supervision over and control of the company.

**Fishguard-Rosslare Service Poster.**—The Western Region is now displaying at stations a striking poster, of which a reproduction appears below, depicting a vessel on the



**FISHGUARD-ROSSLARE**  
shortest sea route to and from SOUTHERN IRELAND  
LUXURIOUSLY APPOINTED  
**STEAMERS** — **EXPRESS**  
TRAIN SERVICES

*Fishguard-Rosslare service poster*

Fishguard-Rosslare service. The poster, of Double Royal size, is the work of Mr. A. G. Mills.

#### Sale of Midland Hotel, Morecambe.

—The Hotels Executive announces the sale of the Midland Hotel, Morecambe, Lancs., which passes to new management after today, July 25. The hotel has been bought by a private purchaser.

#### B.R. Coal, Iron and Steel Carrying.

—Latest weekly tonnage of coal, iron and steel carried by British Railways were up not only on the figures of the preceding week, but also on the corresponding week last year. Deep mined and open-cast coal cleared during the week ended 6 a.m. on July 21 totalled 2,989,830 tons, while iron and steel conveyed from the principal steelworks amounted to 193,065 tons during the week ended July 12.

#### Presentation of Ship Model to Antwerp Museum.

—Lord Hurcomb, Chairman of the British Transport Commission, has accepted an invitation to visit Antwerp tomorrow (July 26) to present to the



National Marine Museum of Belgium a model of the former railway steamer ss. *Antwerp*. This vessel was employed on the Harwich-Antwerp steamer service from 1920 to 1939, and afterwards was on war service as a troopship. The model will be accepted on behalf of the museum authorities by the Burgomaster of the City of Antwerp, who will extend a civic welcome to Lord Hurcomb. Lord Hurcomb will be accompanied by Mr. J. H. Brebner, Chief Public Relations & Publicity Officer, British Transport Commission.

**Memorial Plaque to Thomas Cook.**—On Friday, July 18, the 60th anniversary of his death, a plaque in memory of Thomas Cook, was unveiled by Mr. Cecil Garstang, Assistant General Manager of Thos. Cook & Son Ltd., at 9, Quick Close, Melbourne, Derbyshire, Thomas Cook's birthplace. The inscription on the plaque is: "He made world travel easier."

**Fastenings for Flat-Bottom Railway Track.**—We are informed by the Clyde Rubber Works Co. Ltd. that the rubber pads between rail and sleeper shown in Fig. 10 and 11 of the above article were designed and patented (Patent No. 678731) by that company. It was mentioned in the article that the pads are being used in conjunction with type T4 spikes and with Macbeth spike anchors, no baseplate being used in either case.

**Derailment near Shawford.**—At 3.58 p.m. on July 20, the 3.24 p.m. train from Southampton Central to Waterloo, Southern Region, made up of seven bogie coaches and 4-6-0 locomotive No. 30854 became derailed between Allbrook Junction and Shawford. The locomotive ran down the embankment and the leading coach was derailed, but did not leave the embankment. No passengers were hurt, though the fireman received very slight injuries.

**Institute of Materials Handling.**—Since the decision to form an Institute of Materials Handling, referred to in the Personal columns of our May 30 issue, two meetings of the Provisional Council of Management have been held. A draft of the constitution and regulations has been prepared, and this is now being examined

in detail by a drafting sub-committee before it is presented to the Council for approval. It is anticipated that an inaugural general meeting of the Members will be called during October next when this document will be submitted for ratification. Interest in the Institute is such that already 360 applications for Founder, Associate and Student Membership have been received, coming from as far afield as Argentina, Ceylon, and South Africa.

#### Western Region Stations to be Closed.

The withdrawal of the passenger train service between Pontypridd and Ynysybwl (Glam.) on and from Monday, July 28, has been announced by British Railways, Western Region. Alternative omnibus services operated by Red & White Services Limited, and the Rhondda Transport Co. Ltd., will be available for passengers and the following stations and halts will be closed: Old Ynysybwl Halt, Ynysybwl, Robertstown Halt, Ynysybwl (New Road) Halt, and Clydach Court Halt. Collection and delivery of parcels and passengers' luggage-in-advance will be carried out by lorry service.

**Glyn, Mills & Company.**—The total assets of Glyn, Mills & Company, as at June 30, 1952, were £70,479,837 (against £73,283,783 a year previously). Coin, notes, and balance with the Bank of England amounted to £4,474,327 (£4,436,030), money at call and short notice to £12,451,000 (£8,011,000), British Government Securities to £18,511,537 (£19,393,209), and advance to customers and other accounts to £20,477,277 (£25,264,010). Stock authorised and issued was £1,060,000 (the same), reserve fund £1,060,000 (the same), current, deposit, and other accounts, including provisions and reserve for contingencies £60,899,501 (£62,308,121), acceptances and confirmed credits £3,898,287 (£6,135,571), and engagements on account of customers £3,521,304 (£2,665,754).

**International Machine Tool Industry Luncheon.**—Representatives of some twenty national machine tool associations from overseas will be visiting the forthcoming International Machine Tool Exhibition, to be held at Olympia from

September 17 to October 4. An event unique in the history of the machine tool industry will be held at Olympia on September 25, when the President and Officers of the Machine Tool Trades' Association and members of the Exhibition Committee will give a reception and luncheon in honour of their colleagues from abroad. Office holders and permanent officials of Dominion and foreign machine tool manufacturing, importing and merchanting associations, are being invited, and the international aspect of the exhibition will be stressed by the fact that among the countries to be represented on this occasion will be Belgium, France, Germany, Italy, the Scandinavian countries, Switzerland, and the United States.

**Leyland Motors Limited Agent in East Africa.**—Overseas Motor Transport Co. (E.A.), Ltd., Nairobi, Kenya, has been appointed agent for all the products of Leyland Motors Limited in Kenya, Uganda and Tanganyika.

**San Paulo Railway Payment.**—The directors of San Paulo (Brazilian) Railway have announced that they have received from Brazil the sum of £379,044 in London. This remittance is in payment of £334,502, being the balance due for rolling stock and material supplied since expropriation and of £44,542, being the balance due to electrification expenditure.

**Public Transport Association Incorporated.**—It has been announced by the Public Transport Association Incorporated that a luncheon of the Association will be held during the period of the Commercial Motor Show, and will take place at the Connaught Rooms, Great Queen Street, London, W.C.2, on Friday, October 3. It is hoped that Mr. A. T. Lennox-Boyd, Minister of Transport and of Civil Aviation, will attend as the principal guest of the Association.

**Technical Books List.**—A comprehensive classified book list of all English and American technical books available through normal English bookselling channels is being published on August 9 by the Publishers Circular Limited, 171, High Street, Beckenham, Kent. Individual copies, price 2s. 6d., may be ordered prior to publication, remittance being sent with order to the above address. Approximately 5,000 titles will be listed in alphabetical order under 40 main subject classifications.

**Vickers Limited.**—Interim dividends for the year 1952 declared by Vickers Limited are 2½ per cent. actual on the preferred 5 per cent., and 2½ per cent. actual on the 5 per cent. preference stock, less income tax in both cases. The amount of £2 1s. 3d. per £100 stock payable on the cumulative preference stock is arrived at in accordance with the formula: 2½ per cent. on £100 stock equals £2 10s., which, less income tax 8s. 9d. at 3s. 6d. in the pound) gives a net dividend of £2 1s. 3s.; this is equivalent to a gross amount of £3 18s. 7d., which after deduction of £1 17s. 4d. tax (at 9s. 6d. in the pound) leaves £2 1s. 3d.

**Extra Week-End Trains, N.E. Region.**—To lift the exceptionally heavy traffic leaving Darlington on Friday and Saturday, July 18 and 19, fifteen additional trains were run from Darlington, or called there after having started from Newcastle or Durham. A train also ran on the Friday night at 9.10 p.m. from Bishop Auckland to Bristol, Torquay and Paignton, calling at Shildon and Darlington. A relief train left

### The Fastest Train in Great Britain



Since June 30 the up "North Briton" express of the N.E. Region, seen above passing Cowton, has covered the 44½ miles between Darlington and York in 42 min.—the fastest schedule in Great Britain

## OFFICIAL NOTICES

The engagement of persons answering Situations Vacant advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employment, is exempted from the provisions of the Notification of Vacancies Order, 1952.

**REQUIRED for the Central Railway of Peru.** Railway Stores Assistant (Clerical). Qualifications: Secondary School Education and holding School Leaving Certificate, preferably with some previous commercial experience. Age from 23 to 30 years. Knowledge of Spanish desirable. Single man preferred with experience in a Stores Department of a British Railway or an Engineering concern. Apply to—THE PERUVIAN CORPORATION LTD., 144, Leadenhall Street, London, E.C.3.

**FOR SALE.** Hangar (all steel) 113 ft. clear span  $\times$  135 ft. long  $\times$  25 ft. clear height at eaves, rising to 35 ft. clear at apex. Doors each end (gable optional). Steel Building 111 ft. 6 in. span over frames (101 ft. 4 in. clear) by 216 ft. long by 16 ft. (extensible to 26 ft.) to eaves. Large doors in sides or ends as required. Hangar (all steel) 80 ft. clear span  $\times$  144 ft. long  $\times$  22 ft. clear height at eaves, rising 32 ft. at apex. Doors one end. Steel building 80 ft. clear span  $\times$  144 ft. long  $\times$  22 ft. clear height at eaves. Large sliding doors in sides. Curved steel building 35 ft. span  $\times$  17 ft. 6 in. high at apex. Up to 600 ft. long (low price).—BELLMAN HANGARS LTD., Terminal House, London, S.W.1.

**INTERNATIONAL RAILWAY ASSOCIATIONS.** Notes on the work of the various associations concerned with international traffic, principally on the European Continent. 2s. By post 2s. 2d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

Darlington for London at 10.45 p.m. On Saturday morning, July 19, an additional train was run at 7.33 a.m. from Darlington to Scarborough, one at 7.42 a.m. from Darlington to King's Cross, and at 9.41 a.m. from Darlington to Manchester.

**Closing of Bisley Branch.**—After a life of 62 years the branch from Brookwood, Surrey, to Bisley Camp, the headquarters of the National Rifle Association, closed on July 19, the last day of this year's N.R.A. Imperial Rifle meeting. In future buses will provide a service to the Camp. The N.R.A. moved to Bisley from Wimbledon in 1890. The site was decided on largely as a result of the efforts of the L.S.W.R. which built the branch and provided the stock for it, and quoted a special fare from London for riflemen. On the last day the train, nicknamed the "Bisley Bullet," was decorated, and competitors travelled on the roof.

**Increased York—Skipton Services, N.E. Region.**—On Saturdays during the summer four more trains are being run between York and Skipton, via Harrogate. Their introduction gives four additional express services between York, Knaresborough and Harrogate and also provided a direct-service to the popular Ilkley and Bolton Abbey districts. In addition connections forward from Skipton are available to Blackpool, Morecambe, Kendal, Windermere and Keswick. Excursion bookings are available from York, Knaresborough and Harrogate to Otley, Ilkley, Bolton Abbey, and Skipton on the 9.25 a.m. from York.

**New Layout for Victoria Embankment, London.**—Plans for a new layout of the Victoria Embankment, between the Temple and Westminster Bridge, which Westminster City Council has asked the City Engineer to prepare following the abandonment of the tramway, will include: removal of the tram tracks; two 28 ft. carriageways; a 6 ft. central planted reservation; extension of footway kerbs by one foot; special layout at the junction with Bridge Street; adjustment of levels and cambers; and alterations to traffic signals. Because of the extent of the scheme,

## CROWN AGENTS FOR THE COLONIES ..

**ASSISTANT ESTABLISHMENT OFFICER** required by the Government of Nigeria for the Railway Department for one tour of 18-24 months with prospects of permanency. Salary £711 rising to £1,042 a year including allowances. A higher commencing salary may be allowed in certain cases. Outfit allowance £60. Free passages for the officer and his wife and assistance towards cost of children's passages or their maintenance in the United Kingdom. Liberal leave on full salary. Candidates not over 35 must be educated to matriculation standard and have had experience in dealing with staff work in a large undertaking. Preference will be given to candidates who have followed a course of study on personnel management or secretarial practice. Apply at once by letter, stating age, full names in block letters, and full particulars of qualifications and experience, and mentioning this paper to the CROWN AGENTS FOR THE COLONIES, 4, Millbank, London, S.W.1, quoting on letter M.29151.C. The Crown Agents cannot undertake to acknowledge all applications and will communicate only with applicants selected for further consideration.

**JUNIOR TRAFFIC OFFICIAL** with Railway Traffic apprenticeship experience required for the Southern Railway of Peru, age 20/25 years, single, knowledge of Spanish would be an advantage. Apply to the SECRETARY OF THE PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

**N.E.R. HISTORY.**—Twenty-Five Years of the North Eastern Railway, 1898-1922. By R. Bell, C.B.E., Assistant General Manager, N.E.R. and L.N.E.R. Companies, 1922-1943. Full cloth. Cr. 8vo. 87 pages, 10s. 6d.—*The Railway Gazette*, 33, Tothill Street, London, S.W.1.

the Works & Traffic Committee, in a report to the City Council, recommends the serving of a counter-notice on the London Transport Executive to bring all the works under the Council's direct control.

**Trips to Seaside Illuminations.**—For Blackpool, Morecambe, and Sunderland (Seaburn) illuminations, 206 private, guaranteed and advertised excursion trains have been arranged by the North Eastern Region. Blackpool (September 5—October 20), with 96 trains, will have 46 more than at the same time last year; Morecambe (August 23—October 20), will have 84 trains; and Seaburn (September 6—October 4), 26 trains. For the illuminations at Cleethorpes an experiment is being made with evening excursion bookings from Hull. The ordinary ferry will be used outward in connection with a special train from New Holland pier. A special steamer will be provided on the return.

**Minister to Visit International Machine Tool Exhibition.**—Mr. Duncan Sandys, Minister of Supply, has accepted an invitation to visit the International Machine Tool Exhibition at Olympia on the morning of Thursday, September 18. He will be received by the President and officers of the organising body, the Machine Tool Trades Association, and by the members of the Exhibition Committee. After a tour of the exhibits, the Minister will attend a reception and luncheon at Olympia at which exhibitors will be present. Some 2,000 machines from Great Britain and Belgium, France, Italy, Germany, the Scandinavian countries, Switzerland and the United States will be view at the exhibition, which will be open from September 17 to October 4.

**Australian Fellowships for British Students.**—Sir John Lienhop, Victorian Agent-General in London, has announced the inception of the "British Memorial Fund," a series of fellowships for British students founded by public subscription in Victoria. The fellowships are intended to strengthen the cultural ties between the British and Australian peoples and to interest young British scientists, doctors, engineers, artists,

**REQUIRED for the Southern Railway of Peru.** Locomotive, Carriage and Wagon Senior Draughtsman 30/35 years of age. Qualifications: Must have served a full general apprenticeship in an Engineering workshop (preferably Railway) and have had at least five years' drawing office experience with some time in an executive capacity. A knowledge of Spanish an advantage. Future prospects. Apply to the Secretary, PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

**THE NORTH BRITISH LOCOMOTIVE CO., LTD.,** require the services of an experienced Design Engineer to take charge of their Diesel Traction Design Office. Applicants approximately 35 years of age and upwards should have experience in the preparation of complete tenders including supervision of diesel locomotive project design, weight distribution and performance calculations. Good staff conditions prevail, also excellent Superannuation Scheme. Applications should be made to the Company, 110, Flemington Street, Glasgow, N., giving particulars in detail of training and experience.

**THE "PAGET" LOCOMOTIVE.** Hitherto unpublished details of Sir Cecil Paget's heroic experiments. Eight single-acting cylinders with rotary valves. An application of the principles of the Willans central-valve engine to the steam locomotive. By James Clayton, M.B.E., M.I.Mech.E. Reprinted from *The Railway Gazette*, November 2, 1945. Price 2s. Post free 2s. 3d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

**BOUND VOLUMES.**—We can arrange for readers' copies to be bound in full cloth at a charge of 25s. per volume, post free. Send your copies to the SUBSCRIPTION DEPARTMENT, Tothill Press Limited, 33, Tothill Street, London, S.W.1.

teachers and other professional men and women in Australian arts, science and industry. The British Memorial Fund aims at providing fellowships for British nationals, tenable in Victoria, in a wide range of subjects and the first four are in natural science, industrial research, virology and agriculture. Each fellowship is for £1,000 (Australian). This is to cover travel expenses to and from Melbourne and ten months' living expenses in the State.

**44-Hour Week for G.N.R.(I) Workers.**—At a meeting between representatives of the G.N.R.(I) and the National Union of Railwaymen in Belfast it was agreed that a 44-hour week for the traffic staff of the company in rural areas should operate. The number of workers involved is 224.

**Bruce Peebles & Co. Ltd.**—The net profit for the year ended December 31, 1951, of Bruce Peebles & Co. Ltd., with the balance of £10,295 brought forward and £10,000 from previous provisions for taxation not now required, provides a total available for appropriation of £128,620. Of this, £95,000 has been used to augment present reserves; the fixed assets replacement reserve has been strengthened by the addition of £25,000; the contracts reserve has been increased by £10,000; and £60,000 has been applied to the General Reserve in extension of the policy of capital conservation to finance expansion. The directors recommend payment of dividends, less tax, on the preference stock at 7½ per cent., and a further dividend of 2½ per cent. (contingent on the profits of the year), making the dividend 10 per cent., also a dividend of 15 per cent. on the ordinary stock, totalling £16,681.

**Maidstone & District Motor Services Limited.**—At the forty-first annual general meeting of the Maidstone & District Motor Services Limited on July 9, Mr. R. P. Beddow, Chairman, presided. After discussing the effect of the continued rise in prices of materials and recent wage awards and the severity of the fuel tax, which had added £223,000 a year to operating costs in a two-year period, the Chairman said that they had had to make a further application—only the second in the com-

pany's history—for a general increase in fares. The balance sheet showed that most of the reserves were no longer represented by cash but had already been invested in capital assets. On vehicle replacements £387,000 had been spent during the year. The extension to the bus station and the central overhaul works at Maidstone had been completed. Bookings for the experimental three and eight-day tours had been encouraging.

**First Class Travel to be Abolished in India.**—The Minister of Railways has announced in the Indian Parliament the Government intention to abolish first class travel as soon as possible. He added that air-conditioned coaches would continue and that first class passengers could travel in them.

**Mishap to Euston-Glasgow Express.**—In the early hours of July 18 the 9.10 p.m. Euston to Glasgow express scraped alongside a derailed goods train at Quintinshill, near Gretna, Dumfriesshire. The express was travelling slowly. Windows were broken, and a door torn off. The mishap occurred on the corridor side of the train. Two of the most damaged sleeping coaches were taken off a few miles farther north and were replaced by two ordinary coaches. The train was almost three hours late in reaching Glasgow.

**Bad Oeynhausen Station Returned to Germans.**—The railway station at Bad Oeynhausen, headquarters of the British Army of the Rhine, has been returned to wholly German civilian control. It is said to be the last requisitioned in the Federal Republic. Hitherto, German passengers have had to use a back entrance to get their tickets, the booking hall being reserved for British troops. The return of the station will remove one of the sources of complaints by local German residents. The return of the station is said not to be connected with the finding of a new site for British headquarters in Western Germany.

**Forth Road Bridge Delayed.**—An Edinburgh Corporation representative on the Forth Bridge Joint Board has stated that financial difficulties are an obstacle to construction, at a cost of about £6,250,000 of the proposed single-span road bridge over the Firth of Forth. Contractors' tenders for the foundations could be put out within three months if the country's finances permitted, he said. Work on the bridge could proceed without interruption, for the foundations would take over a year to construct, by which time all plans would be ready.

**Southdown Motor Services Limited.**—At the thirty-eighth annual general meeting of the Southdown Motor Services Limited, held on July 15, Mr. R. P. Beddow, Chairman, presided. The Chairman said that the increase of £207,000 in gross receipts was chiefly a reflection of increase in fares to which he referred a year ago. This increase in revenue had been absorbed and exceeded by higher expenditure, which was mainly caused by the increased cost of fuel and higher wages. On the basis of present operations the company would have to bear in a full year a fuel tax burden in excess of £380,000, or 13 per cent. of the amount of last year's gross receipts. The directors considered that a further general increase in fares might be unavoidable. In the past few months more than £500,000 had been spent on new vehicles. Bookings this year for inclusive holiday tours by coach had exceeded all records.

## Railway Stock Market

The rally in stock markets earlier this month has been followed by a reaction, though in most sections part of earlier gains has been held. The change has, of course, followed Mr. Churchill's warning of new measures to deal with current problems and the need to increase exports if the drain on gold and dollar reserves is to be stopped and the way prepared for rebuilding these reserves. It is generally assumed that the measures to be revealed in the debate in Parliament next week will be designed to increase supplies of materials for export industries, and cuts for the home markets and probably also for rearmament.

Recent talk that the pound may be made freely convertible is believed to be premature, though in the City it is assumed that it may be on the agenda at the conference of Commonwealth ministers expected in November. It is pointed out that in any case it seems unlikely the pound could be made freely convertible until there has been expansion in export trade and this has been reflected in a good rise in the value of the pound. In the early stages of free convertibility there would probably be considerable selling of sterling abroad as a means of increasing dollar holdings, and that for a time at least, free convertibility of the pound would have to be fortified by a substantial dollar loan from Canada. At the time of going to press, markets are tending to steady after their reaction, and British Funds have rallied a little in the hope that the forthcoming proposals will not include a fresh increase in the bank rate; though there may be other measures designed to restrict credit supplies so that capital can be made available for export trade and rearmament needs.

There has been more business in foreign United of Havana stocks on the latest take-over rumours following reports that the Cuban Government has invited bids for the purchase of the railway. As usual, main attention centred on the 5 per cent. (1906) debentures, because it is estimated that they are undervalued in relation to the other stocks, and that this would have to be allowed for in any payout that might result from a successful "take-over" agreement. These 5 per cent. debentures were up to 18 earlier in the week, and have eased to 17½ at the time of going to

press, but still show a good rise on balance. The 4½ per cent. Western debentures were up to 19, and the 5½ per cent. Cuban Central debentures changed hands around 7.

San Paulo 10s. units at 13s. 6d. responded to the news of the compensation payment for the company. Leopoldina ordinary and preference have been firm at 11½ and 20½ respectively. Leopoldina Terminal debentures were 20½ and the ordinary units firmer at 9d.

Antofagasta stocks have also been steadier with the ordinary at 12½ and the preference 57. Brazil Rail bonds were 6½, but elsewhere, Mexican Central "A" debentures eased to 71.

Nitrate Rails shares were 19s. 6d. and Taltal 14s. 6d. In other directions, Chilean Northern 5 per cent. first debentures have marked 31½, and Costa Rica 6½ per cent. debentures, 49½, while International of Central America 5 per cent. first mortgage bonds were dealt in around 140½.

Manila stocks have been less active, with the "A" debentures 78 and the preference shares 9s. 3d. Canadian Pacific eased to \$64. The preference stock firmed up to 61½ and the 4 per cent. debentures 76½.

Road transport shares were well maintained and firm with Southdown at 72s. 6d., West Riding 32s. and Lancashire Transport 39s. 6d. B.E.T. deferred stock has been steady at £400.

Engineering shares, after easing, turned firmer on the assumption that many sections of the industry will benefit from plans for increasing the export drive. It is being assumed that engineering products probably offer the best scope for helping export trade at the present time. Guest Keen were 50s. 9d., John Brown 42s. 3d., Vickers 41s. 6d., while Ruston & Hornsby at 36s. responded to the big increase in profits and the raising of the dividend from 9 per cent. to 11 per cent. Murex at 52s. also responded to the increase in their dividend from 12½ per cent. to 15 per cent. T. W. Ward remained a steady feature at 69s. 6d.

Among shares of locomotive builders and engineers, Beyer Peacock were 27s. 6d., Birmingham Carriage 31s. 3d., Hurst Nelson 49s. and North British Locomotive 15s. Vulcan Foundry were 21s. 3d., Gloucester Wagon 10s. shares 11s. 3d., Wagon Repairs 5s. shares 11s. 9d. and Charles Roberts 5s. shares 21s. 3d.

## Traffic Table of Overseas and Foreign Railways

Railway	Miles open	Week, or month ended	Traffics for week		No. of week	Aggregate traffics to date	
			This year	Inc. or dec. compared with 1950/51		Total 1951/52	Increase or decrease
South & Cen. America	Antofagasta ...	800	11.7.52	£ 153,980 + £ 23,840	28	£ 4,318,340 + £ 1,078,030	
	Costa Rica ...	281	May, 1952	c1,552,666 + c986,013	48	c14,398,842 + c4,220,309	
	Dorada ...	70	June, 1952	33,098 - 3,445	26	199,714 - 14,046	
	Inter. Ctl. Amer. ...	794	May, 1952	\$1,164,607 + \$109,881	22	\$5,934,561 + \$35,884	
	Paraguay Cent. ...	274	11.7.52	G520,118 + G212,631	2	G766,951 + G252,621	
	Peru Corp. ...	1,050	June, 1952	\$9,361,000 + \$828,000	52	\$101,373,000 + \$8,619,000	
	" (Bolivian Section) ...	66	June, 1952	Bs.16,557,000 + Bs.590,000	52	Bs.197,648,000 + Bs.37,299,000	
	Salvador ...	100	Apr., 1952	c139,000 - c27,000	44	c1,746,000 + c17,000	
	Taltal ...	122	June, 1952	\$2,062,000 + \$387,000	52	\$28,040,000 + \$7,495,000	
Canada	Canadian National†	23,473	May, 1952	19,453,000 + 1,554,000	22	91,275,000 + 9,163,000	
	Canadian Pacific†	17,037	May, 1952	13,042,000 + 581,000	22	60,769,000 + 4,122,000	
Various	Barsi Light* ...	167	May, 1952	29,565 + 2,895	4	66,825 - 15,862	
	Gold Coast ...	536	Apr., 1952	323,411 + 29,019	4	323,411 + 29,019	
	Mid. of W. Australia ...	277	Apr., 1952	55,294 + 14,287	44	577,894 + 179,361	
	South Africa ...	13,398	21.6.52	2,013,838 + 167,770	12	23,250,461 + 1,154,461	
	Victoria ...	4,744	Feb., 1952	2,176,542 + 436,697	35	—	

\* Receipts are calculated at 1s. 6d. to the rupee

† Calculated at \$3 to £1

‡ Aggregate receipts for five days in 1952-53, compared with seven days in 1951-52